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U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7) (U)

1 October - 31 December 1961

unclassified ex cept

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UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)
Second Quarter, FY 1962
(1 October - 31 December 1961)

SECTION I - INTRODUCTION

1. (U) The U. S. Army Chemical Corps Field Requirements Agency during the period reported on (second quarter, Fiscal Year 1962) operated under provisions of Chemical Corps Regulation Nr 10-18, "U. S. Army Chemical Corps Field Requirements Agency," dated 28 February 1961. The Agency (hereinafter referred to as CCFRA) was stationed at Fort McClellan, Alabama; assigned as a Class II activity under the jurisdiction of the Chief Chemical Officer, with staff supervision and operational control by the Director for Military Operations; and attached for administrative and logistical support to the U. S. Army Chemical Corps Training Command. The Commanding Officer of CCFRA was Colonel Jack E. Babcock, 021413, Chemical Corps. The Historian was Douglas E. Wilson (GS-12), Program Coordinating Officer and Documentation Officer. Where no entry or an incomplete entry is made in the sections that follow, it is to be understood that no change has occurred since the end of the last reporting period.

SECTION II - POLICY

2. (U) Mission and Responsibilities. No change.

3. (U) Programs and Projects. The work of CCFRA in carrying out its missions and responsibilities has continued as described in previous reports, with no change in the system of numbering projects outlined in the report for 1 January - 31 March 1961. Action on all numbered projects is summarized in Section III below, and separate progress reports on all current projects are attached in Annex A.

4. (U) Organization and Administration.

a. No change in organization or in the Table of Distribution was made during this period.

b. CCFRA moved from offices in rooms 224-233 in the U. S. Army Chemical Corps School (Building 3181, Fort McClellan) to rooms 47-51 in the same building on 12-13 October 1961. The principal advantage gained was a more efficient arrangement of the offices of the Commanding Officer, Deputy Commander, Scientific Advisor, Executive Officer, Program Coordinating Officer, and Administration Office.

c. No changes were made in the authorized officer or enlisted spaces. Two additional civilian spaces were authorized by the Comptroller, US Army Chemical Corps Training Command, for temporary employment of two

clerk-typists (GS-2), one each in the Chemical and the Biological Divisions. At the end of the quarter, the Agency was understrength two officers (with one more under orders to depart in January 1962), two enlisted men (both S & E), and three civilians; on that date the various offices and divisions were at the strengths shown below:

	Authorized				Assigned			
	OFF	EM	Civ	TOTAL	OFF	EM	Civ	TOTAL
Office of the CO	3	0	2	5	2	0	2	4
Admin Office	1	2	2	5	0	2	2	4
Documentation Office	0	0	2	2	0	0	1	1
Chemical Division	6*	4	4**	14	7	3	4**	14
Biological Division	5*	3	4**	12	5	3	3**	11
Radiological Division	6*	3	3	12	5*	2	2	9
TOTALS	21	12	17	50	19	10	14	43

5. (U) Changes in Key Personnel.

a. Assigned. 2d Lt Homer C. Jennings, Chemical Staff Officer, Chemical Division, originally attached on six-month active duty status, was ordered to twelve months additional active duty, relieved from attachment, and assigned to CCFRA effective 8 October 1961.

b. Departed.

(1) Lt Col William G. MacFarlane, Executive Officer, was transferred to the U. S. Army Chemical Corps School, effective 20 Dec 1961.

(2) Lt Col Richard A. Munn, Armor Staff Officer, Biological Division, departed 27 December 1961 for assignment to Eighth U. S. Army, Korea, with temporary duty enroute as student at U. S. Army Command and General Staff College (Associate Course).

c. Changes in Duty. None.

d. Changes in Command. The following officers successively assumed command, as announced by CCFRA General Orders on the dates indicated:

(1) Lt Col David C. Smith (in the temporary absence of Colonel Babcock), GO Nr 19, 18 October 1961.

(2) Colonel Jack E. Babcock, GO Nr 20, 19 October 1961.

* Includes one Infantry (Cml Div), one Armor (Biol Div), and one Artillery and one Medical Corps (Radl Div) authorized; no Infantry, Armor, or Artillery officers assigned. All others Chemical Corps.
** Includes one temporary clerk-typist (GS-2) each in Cml Div and Biol Div.

(3) Lt Col Smith (in the temporary absence of Colonel Babcock), G.O. Nr 21, 12 December 1961.

(4) Colonel Babcock, G.O. Nr 22, 15 December 1961.

(5) Lt Col Smith (in the temporary absence of Colonel Babcock), G.O. Nr 23, 26 December 1961.

e. Promotions. None.

6. (U) Initiation or Cancellation of Major Programs or Projects. No major programs were initiated or cancelled during this quarter. Individual projects initiated and terminated are shown in Section III below, and in the quarterly progress reports on projects in Annex A.

7. (U) Fiscal Information Bearing Upon Mission and Responsibilities.

a. No change was made in the Annual Funding Program for CCFRA in Budget Program 2000. However, Budget Program 2100 (TDY, Schooling of Military Personnel) was increased from $2,000 to $3,000, making a total funding program of $192,000 for the current fiscal year. By this action, unfinanced requirements were reduced to zero.

b. Obligational authority for the record quarter was for $50,000 in Program 2000 and $1,000 in Program 2100. Actual obligations were as follows:

Budget Program 2000:

Pay of Civilian Personnel	$27,026.48
Government Share of Retirement, etc.	1,908.28
Administrative Travel	1,038.57
Administrative Supplies & Equipment	3,457.06
Troop Tests	675.23
TOTAL	$34,105.62

Budget Program 2100:

TDY, Schooling of Military Personnel	$132.16
Total Obligations	$34,237.78

c. The foregoing obligations, added to those of $31,783.65 in the first quarter, made a total of $66,021.43 for the first half-year (34.4% of allotment), leaving a balance of $125,978.57 for the second half-year (65.6% of allotment).

8. (U) Relationships with Other Agencies. No change was made in basic liaison relationships and procedures. Conferences and meetings at Fort McClellan of CCFRA personnel with members of other agencies are

b. The initial draft reports on Projects CMLCD 58-7 (Phase II) and 59-27, submitted in the preceding quarter, were accepted by OCCmlO in lieu of coordinated final reports.

c. Projects CMLCD 58-4, 59-5, 59-16 (Phase II, Part 1), and 60-13, submitted in the preceding quarter, were approved by OCCmlO, and distribution of the final reports on these projects was made.

d. Projects CMLCD 62-10, "Logistical Problems of CBR Protection (U)," and 62-18, "Concepts for Employment of Chemical-Filled Shell for the Self-Propelled 175mm Gun (U)," were deleted from the program before any work on them had started. In addition, work on CMLCD 61-8 was suspended, since part of its objective was already accomplished and the rest was to be performed by MELPAR, Inc., by revision to its current R & D contract.

14. (U) Tripartite Conference Activities. No plans for CCFRA participation in the Sixteenth Tripartite Conference on Toxicological Warfare had been made by the end of this period.

15. (U) Combat Developments Program Planning.

a. The CCFRA Operating Program document for FY 1962 was published and distributed on 13 October 1961.

b. At the beginning of the quarter, the program for FY 1962 included 23 projects (one in four parts). Cancellation of projects listed in paragraph 13d above reduced the number to 21 projects.

c. By letter, CMLMO-CD, 7 December 1961, subject: "Combat Development Five-Year Program," OCCmlO directed CCFRA and the U. S. Army CmlC Board to submit proposals for changes and additions to the current five-year program, including extention into FY 1967, by 1 February 1962, together with estimates of funding requirements for Fiscal Years 1963 and 1964. Divisions of CCFRA were requested to submit project proposals and workload data to the Program Coordinating Officer by 12 January 1962.

SECTION IV - EVENTS

16. (U) Many of the events of most historical interest or importance during this period are included in the quarterly progress reports on projects, attached in Annex A, and the reports of TDY, attached in Annex B. CCFRA personnel participated in a large number of conferences and meetings at Fort McClellan with representatives of Headquarters, U. S. Army Chemical Corps Training Command and/or the U. S. Army Chemical Corps School; however, while all these discussions contributed in some degree to the accomplishment of CCFRA's mission, it is considered that the majority of them were not significant enough in themselves to be included in this report. The most important of these, and other events of particular interest not covered in the annexes (including all visits by representatives of agencies outside Fort McClellan), are briefly summarized in the following paragraphs.

17. (U) (5 October 1961) Captain Lopes, U. S. Army Aviation School, visited CCFRA and conferred with Lt Col Brigden and Dr Gardner on a draft QMR for an aerial delivery system for smoke and flame. Formal comments on this QMR were submitted later through official communication channels.

18. (U) (9-13 October) Lt Col Munn and Major Armstrong participated as controllers in a CPX for students in the Associate Chemical Officer Career Course, CmlC School.

19. (U) (17 October) Colonel E.V.R. Needels, Chemical Officer, USCONARC, visited CCFRA and was briefed by Colonel Babcock on the organization, mission, and operations of the Agency.

20. (U) (21 October - 5 November) Captain Buckner attended the OMETA course, "ADP for the Systems Analyst," at Rock Island Arsenal, Illinois.

21. (U) (23-27 October) Lt Col Peter M. Milo, British Army Liaison Officer to the U. S. Army Chemical Corps, visited CCFRA and discussed various combat development problems with Colonel Babcock, Lt Col Smith, and the division chiefs and other Agency personnel.

22. (U) (25 October) Captain William Swigert, US Marine Corps, of the Naval Nuclear Training Center at Norfolk, Va., visited CCFRA and conferred with Colonel Babcock, Lt Col Smith, Lt Col Stephens, and members of the Radiological Division on matters related to radiological defense.

23. (U) (1-3 November) Mr. Seymour Waxman, Combat Developments Division, OCCmlO, visited CCFRA and discussed the Agency's program and various projects with Colonel Babcock, Lt Col Smith, Mr Wilson, and the division chiefs and other personnel.

24. (U) (3 November) Lt Col Roy E. Branson, Chemical Section, HQ USCONARC, visited CCFRA and discussed combat development matters with Colonel Babcock, Lt Col Smith, and Dr Gardner.

25. (U) (5-6 November) Lt Col W.P.E. Curlewis, Australian Army representative to the U. S. Army Chemical Corps, visited CCFRA and was briefed by Colonel Babcock, the division chiefs, and others on the Agency's mission and operations and on several current projects.

26. (U) (6 November) Captain J. M. Turner, Office of the Director for Military Operations, OCCmlO, visited CCFRA and conferred with Lt Col Stephens and members of the Radiological Division on current and future projects in that division's program.

27. (U) (12-18 November) Lt Col Stephens attended the semiannual session of the Academic Advisory Board to the CBR Weapons Orientation Course at Dugway Proving Ground, Utah.

28. (U) (14 November) Lt Col Khalil Ibrahim Hussein, Iraqui Army, visited CCFRA and was briefed by Colonel Babcock and the division chiefs (Captain Nord substituting for Lt Col Stephens) on the mission and organization of the Agency. Other matters of common interest were also discussed.

29. (U) (15 November) Mr. H. F. Meyers, Chief of Analytical Section, Dugway Proving Ground, and Mr. Norman Reich, Test Division, Chemical R & D Laboratories, visited CCFRA and discussed problems of VX pick-up with Lt Col Reagan and Dr Gardner.

30. (U) (16 November) Major Robert R. Doddridge, Canadian Army Liaison Officer to the U. S. Army Chemical Corps, visited CCFRA and conferred with Colonel Babcock, Lt Col Smith, Lt Col Reagan, and Dr Gardner on various combat development matters.

31. (U) (28 November) A conference was held in which Colonel Babcock, Lt Col Smith, Dr Gardner, and Mr Wilson of CCFRA, Lt Col Bliss and Mr Philips of CmlC Training Command, and Mr Summerlin, Mrs Smith, and Mr Hendrix of the Fort McClellan Civilian Personnel Office discussed ways and means to recruit qualified professional civilian personnel to fill current vacancies.

32. (U) (1 December) For the second successive year, CCFRA achieved 100% participation, by both military and civilian personnel, in the United Givers Fund Drive.

33. (U) (4-8 December) Colonel Babcock and a considerable number of other Agency personnel attended and participated in the discussion at the World-Wide Chemical Officers Conference at the CmlC School.

34. (U) (5 December) Captain Coe, project officer on CMLCD 62T31 (Project "SAMPLES"), attended the first of a series of conferences with Lt Col Hunt, Mr Trathen, Major Cope, and Major Torres of HQ, CmlC Training Command, to plan for assistance to CCFRA in this test by the CmlC Training Command and 100th Chemical Group.

35. (U) (8 December) Mr Herman Brown, Military Physics Research Laboratory, University of Texas, visited CCFRA and conferred with Lt Col Stephens and other members of the Radiological Division on problems of computer research in connection with employment of nuclear weapons, radiological survey, dosimetry, etc.

36. (U) (13-14 December) Lt Col J. Schneider, VC, of the U. S. AMEDS Combat Development Group, Fort Sam Houston, Texas, visited CCFRA and conferred with Dr Restool, Mr Gaines, and Mr Wilson on matters connected with the impact of CBR on Army Medical Service activities.

37. (U) (14 December) Mr J. N. Weaver, Mr P. H. Malloy, and Mr P. Rauberson of the Sylvania Electric Products Corporation visited CCFRA and conferred with Lt Col Stephens, other members of the Radiological Division, and Lt Col Kontra and other representatives of the CmlC School on requirements for automatic data processing in the field army.

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U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)

1 October - 31 December 1961

ANNEX A

INITIAL PROJECT REPORTS

AND

QUARTERLY PROGRESS REPORTS

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EA-SRD-931 (71)

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 58-4

TITLE OF PROJECT: Chemical Field Decontamination Requirements (U)

PROJECT OFFICER: Captain Coe

OBJECTIVE: The objectives of this study are to determine the chemical field decontamination requirements consistent with broad operational and logistical concepts and capabilities and to develop techniques and material and organizational requirements essential to continued operations under conditions of chemical contamination.

INITIATION DATE: 31 July 1958.

ESTIMATED DATE OF COMPLETION: 16 October 1961.

STATUS: A revised final draft of study was forwarded to OCCmlO on 31 July 1961. Study was approved by Chief Chemical Officer on 25 September 1961. Recommended distribution list was approved less those copies scheduled for operating forces which require prior approval by USCONARC. Final distribution was made on 16 October 1961.

MAN-HOURS EXPENDED DURING QUARTER: 69

Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 58-7, Phase II

TITLE OF PROJECT: Requirements for Chemical Corps Units in the Army in the Field (U)

PROJECT OFFICER: Lt Col Munn

OBJECTIVE: To determine the Chemical Corps units required to support the army in the field in the current and mid-range time frames.

INITIATION DATE: 2 February 1961.

ESTIMATED DATE OF COMPLETION: Completed (unless OCCmlO directs otherwise).

STATUS: It was determined that the draft study, although based primarily on the CSSO concept of administrative support, would be of value to OCCmlO and should, therefore, be completed and forwarded. It was decided that no other distribution would be made unless subsequently directed by OCCmlO. The project officer completed the study in September and it was forwarded to OCCmlO on 2 October 1961 in four typewritten copies. No written approval has been received to date; however, word has been received that no further work will be required. Distribution is pending action by DRD.

MAN-HOURS EXPENDED DURING QUARTER: 15

U.S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLCR 59-5

TITLE OF PROJECT: The Tactical Use of V-Agents

PROJECT OFFICER: Dr. Gardner

OBJECTIVE: a. To develop tactics and techniques for the employment of VX with standard munitions and munitions under development to be used as a basis for the preparation of doctrinal literature.
b. To develop guidance for further research and development concerning applications of other potential agent-munition combinations which could be obtained by 1965.

INITIATION DATE: 21 July 1959

ESTIMATED COMPLETION DATE: 26 October 1961

STATUS: Target analysis of type targets for attack using VX weapons has been accomplished. Data received from USACRDL on pick-up and persistence of VX have been analyzed to evaluate the potential use of this agent in barrier plans as well as to estimate friendly troop safety factors in exploitation of a VX attack on the enemy. Also, the relative vulnerability of troops as affected by variations in clothing has been investigated, including U.S., U.S.S.R., and C.C.F. forces.

The final draft was submitted to OCCmlO and USACmlC Board in August 1961, and was coordinated by the project officer in conference with both agencies.

The study was forwarded to OCCmlO on 11 September 1961, and approved for distribution by letter, OCCmlO, on 29 September 1961 (received 9 October 1961). Distribution was made 26 October 1961 to internal agencies and in accordance with USCONARC Pamphlet 70-1.

MAN-HOURS EXPENDED DURING QUARTER: 95

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 1

TITLE OF PROJECT: Application of Automatic Data Processing System(s) (ADPS) to Chemical Corps Field Activities, Chemical Supply Systems Analysis

PROJECT OFFICER: Lt Phillips

OBJECTIVE: To determine and validate by processing systems analysis, the application of automatic data processing to chemical supply procedures in the field army.

INITIATION DATE: 1 December 1960

ESTIMATED DATE OF COMPLETION: 15 November 1961

STATUS: Final draft was forwarded to ZBD 28 September 1961, and approved by ZBD on 23 October 1961. Distribution of the final report was made on 15 November 1961.

MAN-HOURS EXPENDED DURING QUARTER: 21

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 3A

TITLE OF PROJECT: Fallout Prediction Systems Analysis of Application of Automatic Data Processing System(s) (ADPS) to Chemical Corps Field Activities.

PROJECT OFFICER: Capt Buckner

OBJECTIVE: To determine and validate by means of system analysis the application of automatic data processing to the prediction of radiological fallout within the field army.

INITIATION DATE: 1 December 1960, present project officer assumed responsibility for project on 23 June 1961.

ESTIMATED DATE OF COMPLETION: 31 March 1962 (may be completed in February 1962)

STATUS: Initial draft, scheduled for completion 31 December 1961, was completed and distributed 15 December 1961. Addressees were given until 31 January 1962 to return comments. It is planned to complete final draft in February 1962. (Project Officer was alerted for PCS in February 1962, but now deferred until July 1962.) Project Officer attended Systems Analysis Orientation Course at Rock Island, Illinois, 23 October - 4 November 1961.

MAN-HOURS EXPENDED DURING QUARTER: 800.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 3B

TITLE OF PROJECT: Contamination Charting Systems Analysis of Application of Automatic Data Processing System(s)(ADPS) to Chemical Corps Field Activities

PROJECT OFFICER: Captain Buckner

OBJECTIVE: To determine and validate, by means of systems analysis, the application of automatic data processing to the area of radiological contamination charting within the field army.

INITIATION DATE: 1 December 1960. Project officer assumed responsibility for project on 23 June 1961.

ESTIMATED DATE OF COMPLETION: 30 September 1962.

STATUS: Little progress was made on this study during the quarter. Major effort was directed toward part 3A of this same subject. Initial draft of part 3A was distributed 15 December 1961. Literature research continues on 3B with the project being approximately 5% completed. The project officer was alerted for PCS in February 1962. OCCmlO was requested to extend Capt Buckner to complete part 3B. Verbal extension to July 1962 was granted on 15 December 1961. It is essential that Capt Buckner remain here for a few months if this study is to be accomplished.

MAN-HOURS EXPENDED DURING QUARTER: 100

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 4

TITLE OF PROJECT: "Systems Analysis of the Employment of Toxic C&B Munitions" of Application of Automatic Data Processing System(s)(ADPS) to Chemical Corps Field Activities

PROJECT OFFICER: Lt Phillips

OBJECTIVE: To determine and validate the application of automatic data processing to target analysis for the employment of toxic C&B munitions in the field army.

INITIATION DATE: 1 December 1960

ESTIMATED DATE OF COMPLETION: 1QFY63

STATUS: This report will be a detailed systems analysis of target analysis procedures used in the employment of toxic C&B munitions, to include the present system, a prepared improved manual system, and a proposed system using ADP procedures. The time frame considered will be 1961-1965. The present target analysis procedures are now being set forth based on TM 3-200. Work this part quarter has been confined to the present system. A major problem is determining the specific origin and form of the required input data. It is estimated that the initial draft will be issued for coordination on 30 April 1962. The project is about 25 per cent complete. Little work accomplished this quarter on Part 4. Final report of Part 1 of same study was distributed 15 November 1961, and project officer gave assistance to preparation of initial draft of Part 3A. Project officer is also attending Prefix 5 course at CmlC School.

MAN-HOURS EXPENDED DURING QUARTER: 200

U.S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLCD 59-27

TITLE OF PROJECT: Requirements for Chemical Corps-Trained Officers by MOS, Army in the Field, 1961-1965 (U)

PROJECT OFFICER: Lt Col D.A. Brigden

OBJECTIVE: To develop predictions pertaining to the quantitative and qualitative requirements of the army in the field during 1961 to 1965 for officers with MOS's for which the Chemical Corps has training or training monitorship responsibility.

INITIATION DATE: 10 November 1959

ESTIMATED DATE OF COMPLETION: January 1962

STATUS: The initial draft was forwarded to DRD 4 October 1961. Because of certain actions initiated at CONARC and DA levels since the preparation of CMLCD 59-27, it was tentatively agreed that the initial draft report would be used only within the Chemical Corps as a source document for future actions.

Letter from DRD 29 November 1961 directed that work on study be terminated. Minor corrections were suggested for the initial draft and limited distribution was authorized.

Since receipt of letter on 29 November 1961, project officer has been working on three separate action papers associated with current build-up, and actions indicated in paragraph 2 above will not be accomplished until January 1962.

MAN-HOURS EXPENDED DURING QUARTER: 37

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

31 December 1961

NUMBER OF PROJECT: CMLCD 61-1

TITLE OF PROJECT: Organization for Radiological Survey, Phase I: The Division

PROJECT OFFICER: Captain Alan A. Nord

OBJECTIVE: To review, and develop as appropriate, organizational and operational concepts, material requirements, and communications requirements for radiological survey by reorganized Army units in a theater of operations, to include broad concepts for survey of enemy territory.

INITIATION: 29 September 1961

COMPLETION: March 1962

STATUS:

1. A trip to OCCmlO and ACC was made during the period of 4 to 8 December to discuss the preliminary draft. Preliminary coordination was accomplished with the Office of the Director for Military Operations, the Chemical Corps Board, and the Nuclear Defense Laboratory.

2. The initial draft was distributed for comment on 21 December, and a recommended distribution list for the final draft was furnished to the Director of Military Operations.

3. Tentative conclusions and recommendations are as follows:

   a. Conclusions:

      (1) Aerial survey should be the routine method of radiological survey in the division.

      (2) The capability for ground radiological survey must be retained for use in emergencies or in very special situations.

      (3) The present capability for aerial survey is not adequate for the ROAD divisions in the mid-range time frame.

(4) There is an urgent requirement for the rapid development of the planned aerial radiac instrument system.

(5) All developmental Army observation and Utility aircraft, including helicopters and drones, should be designed and equipped to receive the new aerial radiac system by a "plug-in" arrangement.

(6) The proposed staffing of the CBRE in the division chemical section is inadequate for sustained twenty-four-hour operations.

(7) With the exception of (6) above, organization for radiological survey in the division is adequate. All units are capable of monitoring, and radiological survey can be assigned as an additional duty.

(8) Distribution of instruments for the dual purpose of radiological monitoring and survey is adequate (with the minor exception of mortar and Davy Crockett platoons in the infantry and mechanized infantry battalions).

(9) Development of a single instrument for area monitoring and personnel and equipment monitoring would be desirable.

(10) Monitor reporting under the new reduced frequency concept should be within the capabilities of currently planned communications.

(11) The term "Radl Cen" (as well as "Radl Computer" and "Radl Plotter") used in the Draft Series E TOE's does not properly reflect the chemical and biological aspects of this organization's mission.

(12) There is a requirement for a facsimile or telautograph system linking division TOC with brigade, division artillery, and division support command headquarters to provide rapid transmission of pictorial radiological contamination charts (on a joint user basis).

(13) There is a requirement for the proposed "tracker-plotter" system in the CBRE during the time between the availability of the aerial radiac instrument system and the availability of an automatic data processing system for contamination charting.

(14) Radiological survey of enemy territory of operational interest to the division can best be performed by aerial survey with drone aircraft. The optimum current capability is aerial survey by manned aircraft.

b. Action Recommended:

(1) That USCONARC direct appropriate future training literature to indicate aerial survey as the primary means of radiological survey, and to explain the importance of continued capability and training in ground radiological survey.

(2) That USCONARC take action to insure the accelerated development of the required aerial radiac instrument system.

(3) That USCONARC take action to coordinate the development of Army aircraft, helicopters, and drones with that of the aerial radiac system so that any applicable aircraft can accept the radiac system on a mission basis (by "plug-in"arrangement).

(4) That USCONARC take action to increase the division chemical section by adding one computer and two plotters to the authorization of the Draft E Series TOE's in order to provide a CBRE capable of sustained twenty-four hour operations.

(5) That USCONARC take action to include the additions and deletions of radiac instruments in the Final E Series TOE's as recommended in Annex B.

(6) That USCONARC change the term "Radl" used in Draft Series E TOE's (division chemical section) to read "CBR" and change the term "Radl Cen" to read "CBRE."

(7) That USCONARC authorize facsimile or telautograph devices at division, brigade, division artillery, and support command headquarters for the purpose (among others) of transmitting pictorial contamination charts.

(8) That USCONARC initiate steps to determine the feasibility of the "tracker-plotting"system (described in Annex A) for the plotting of data from aerial radiological surveys.

(9) That USCONARC plan early ROAD troop tests of the monitoring and current aerial survey capability procedures to determine the compatability of these procedures with the communication systems available.

4. It is anticipated that the final draft will be submitted well before 31 March 1962.

MAN-HOURS EXPENDED DURING QUARTER: 520

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLCD 61-8

TITLE OF PROJECT: Organizational and Operational Concepts of a Chemical Attack Early Warning System, 1965-1970 (U)

PROJECT OFFICERS: Lt Col D. A. Brigden and 2d Lt Homer C. Jennings, Jr.

OBJECTIVE: To provide concepts of organization and operation for a chemical attack early warning system for the field army for the 1965 to 1970 period.

INITIATION DATE: 6 June 1961

ESTIMATED DATE OF COMPLETION: Pending OCCmlO decision concerning cancellation.

STATUS: In connection with an effort to reduce the formal project program to allow work on current priority actions, it was proposed that this project be accomplished by contract. Ltr CMLMO-CD, OCCmlO, 15 December 1961, directed that work be suspended while consideration is given to this proposal. At the time of suspension the project was about 6 % completed. Future action will involve either providing guidance to the contractor or rescheduling completion of the project, depending upon the decision concerning the proposed cancellation.

MANHOURS: 163

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 31 December 1961

NUMBER AND TITLE OF PROJECT: CMLCD 61-9, Organizational and Operational Concepts of a BW Early Warning System (U).

PROJECT OFFICER: Dr. Restool.

OBJECTIVE: To provide organizational, operational, and logistical concepts of a BW Early Warning System for integration into the operational early warning system of the Field Army.

INITIATION: 6 February 1961.

COMPLETION: 8 December 1961.

STATUS: The final draft of this project was sent to OCCmlO on 8 December 1961, one week ahead of schedule. The comments of the Chief Signal Officer were not included in the final draft because this Agency was notified that these comments would not be forthcoming in time to be considered during time allotted for preparation of final draft. Comments arrived after completion of final draft, but were not of the nature that would have significantly affected its contents. On 18 December 1961 OCCmlO requested copy of comments sent to FRA by the Chief Signal Officer. These were sent on 21 December 1961. OCCmlO approved the final draft on 29 December 1961.

MANHOURS THIS QUARTER: 477.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 61-11

TITLE OF PROJECT: Concepts for Employment of Chemical Warheads for the LITTLE JOHN Rocket (U)

PROJECT OFFICER: Mr. Gaines (as of 19 September 1961)

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of chemical warheads for the LITTLE JOHN rocket in support of the army in the field during themmid-range time frame.

INITIATION DATE: 3 November 1960

ESTIMATED DATE OF COMPLETION: 28 February 1962 (see status)

STATUS: A new project officer was put on this study 19 September 1961, as the initial draft was unsatisfactory. Extension of time was refused by DMO. With overtime work, the initial draft was distributed 31 October 1961. Comments from DMO were received 26 December 1961, with instructions to circulate revised initial draft to external agencies. This external distribution will take until approximately 15 February 1962, with final draft going out by 28 February 1962.

Project officer for 61-11 must also do final draft of 61-13, since Captain Terlaje is leaving for school 5 January 1962.

MAN-HOURS EXPENDED DURING QUARTER: 672

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 31 December 1961

NUMBER AND TITLE OF PROJECT: CMLCD 61-12, Concepts for Employment of Biological Warheads for the SERGEANT Missile (U).

PROJECT OFFICER: Lt Filipkowski.

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of biological warheads for the SERGEANT missile in support of the Army in the field during the mid-range time frame.

INITIATION: 25 May 1961.

COMPLETION: 15 January 1961.

STATUS: The initial draft was distributed to interested agencies on 23 October 1961. By request from OCCmlO a revised initial draft was prepared and distributed on 14 December 1961. The final draft is scheduled to be completed by 15 January 1962 and it is expected this date can be met if comments concerning revised initial draft arrive on time. Comments are lacking from USA C&GSC, USA Arty Sch, and USA Ordnance Board.

MANHOURS THIS QUARTER: 421.

Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 61-13

TITLE OF PROJECT: Concepts for Employment of Chemical Warheads for the SERGEANT Missile (U)

PROJECT OFFICER: Captain Terlaje

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of chemical warheads for the SERGEANT missile in support of the army in the field during the mid-range time frame.

INITIATION DATE: 28 November 1960

ESTIMATED DATE OF COMPLETION: 3QFY62

STATUS: Initial draft distributed to Chemical Corps agencies 3 October 1961. Letter from DMO on 17 November 1961 directed revision of initial draft and distribution to outside agencies. Revised initial draft mailed 8 December 1961 to Artillery and Missile School, Logistic Management School, CNSC, and Ordnance Board. These agencies were given until 5 January 1962 to send comments. Capt Terlaje is on orders to report to the CmlC School for the Associate Career Course, starting 7 January 1962. Other project officers will attempt to complete the final draft and forward to DMO by 15 January 1962 (extended target date per letter DMO 17 November 1961).

491

MAN-HOURS EXPENDED DURING QUARTER:

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 31 December 1961

NUMBER AND TITLE OF PROJECT: CMLCD 62-7, Operational and Logistical Concepts for Chemical and Biological Modules for Army Drone Systems (U).

PROJECT OFFICER: Mr. Restool.

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of Army drones with a chemical and biological capability in support of the Army in the field during the mid-range time frame.

INITIATION: 7 February 1961.

COMPLETION: 31 May 1962.

STATUS: The initial draft was presented to FRA Review Board and a request was made to advance the due date of initial draft to 28 February 1962 to incorporate incoming data on logistical plans. This request was approved by OCCmlO. The date for completion of final draft was advanced to 31 May 1962. The project is therefore on schedule and initial draft can be distributed shortly after receipt of logistical plans.

MANHOURS THIS QUARTER: 561.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

31 December 1961

NUMBER OF PROJECT: CMLFD 62-8

TITLE OF PROJECT: U. S. Army Radiation Dosimetry System (U)

PROJECT OFFICER: Mr. Henry P. Whitten

OBJECTIVE: To develop the requirements for radiation dosimetry and to develop a U. S. Army dosimetry system compatible with predicted U. S. Army organizations and procedures.

INITIATION: 4th Quarter, FY 1962 (estimated)

COMPLETION: 2nd Quarter, FY 1963 (estimated)

STATUS: Document research has been initiated. A tentative outline and project schedule was also prepared. It is estimated that the draft project directive package will be submitted to OCCmlO before 15 May 1962.

MAN-HOURS EXPENDED DURING QUARTER: 38

U.S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLCD 62-10

TITLE OF PROJECT: Logistical Problems of CBR Protection (U)

PROJECT OFFICER: Mr. Gaines

OBJECTIVE: To determine the logistical problems incidental to the maintenance and supply of CBR protective material for the Army in the field during the mid-range time frame.

INITIATION DATE: 4Q FY62

ESTIMATED DATE OF COMPLETION: 3Q FY63

STATUS: This study was cancelled by letter from RMO 28 November 1961. Cancellation was occasioned by increased workload of other more important projects.

MAN-HOURS EXPENDED DURING QUARTER: 0

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

2 January 1962

NUMBER OF PROJECT: CMLCD 62-14

TITLE OF PROJECT: Recording Radiation Monitor and Automatic Radiation Alarm

PROJECT OFFICER: Major Armstrong

OBJECTIVE: To develop concepts and organizational requirements for a recording radiation monitor (o-500 r/hr) for radiation detection at fixed and semi-fixed Army installations, and to determine requirements for and distribution of a small, inexpensive automatic radiation alarm.

INITIATION: This project was initiated in the 1st quarter of FY 1962.

COMPLETION: It is estimated the final coordinated draft will be submitted on or before 30 June 1962.

STATUS: The draft directive package has been internally coordinated and edited by the Program Coordinating Officer. The package will probably be dispatched the first week in January 1962. Research on the initial draft of the study is approximately 85% complete. An earlier misunderstanding with DRD concerning the elimination of this project has been resolved and authorization has been received to continue the study as a non-CDOG project. No major problems have been encountered and none are anticipated.

MAN-HOURS EXPENDED DURING QUARTER: 76

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 62-18

TITLE OF PROJECT: Concepts for Employment of Chemical-Filled Shell for the Self-Propelled 175mm Gun (U)

PROJECT OFFICER: Lt Claffey

OBJECTIVE: This study was to be concerned with the Army's employment of chemical shell with the SP 175mm gun. Operational concepts, suitable targets, and round requirements were to be investigated.

INITIATION DATE: 15 July 1961

ESTIMATED DATE OF COMPLETION: 4QFY62

STATUS: This project was recommended for cancellation early in the fiscal year. Colonel Babcock took it to DMO 29 August- 1 September 1961. Written confirmation of cancellation was received in letter 13 October 1961.

MAN-HOURS EXPENDED DURING QUARTER: 0

Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 62-19

TITLE OF PROJECT: Determination of After-Action Decontamination Requirements for Armored Fighting Vehicles and Ancillary Equipment

PROJECT OFFICERS: Lt Claffey and SP4 Harris

OBJECTIVE: To determine after-action requirements and to develop procedures concepts for decontamination of armored fighting vehicles and related equipment beyond that minimum already performed by the crew during the mission recently completed; to determine QMR's; and, if indicated, develop supporting organizational concepts for the current, mid, and long-range time frames.

INITIATION DATE: 2QFY62

ESTIMATED DATE OF COMPLETION: 2Q63

STATUS: The number of this project was reported last quarter as 63T6, Phase I. It has now been changed back to 62-19, which was the original number. There was an attempt to combine the two projects (62-19 and 63T6). Little progress has been made to date on this study; reasons: no qualified project officers, indecision on numbering and scheduling, other priority projects, numerous unsuccessful attempts to cancel. It was felt the project had been definitely cancelled after decision of CONARC to delete the project from the program, but letter from DMO on 28 November 1961 directed that 62-19 would be accomplished. With the completion of other projects early in 3QFY62, it is planned to put other project officers on this study and make a determined effort to complete it by 2QFY63.

MAN-HOURS EXPENDED DURING QUARTER: 42

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 31 December 1961

NUMBER AND TITLE OF PROJECT: CMLCD 62-20, Requirements for Chemical and Biological Warheads for the PERSHING Missile (U).

PROJECT OFFICER: Capt Roark.

OBJECTIVE: To evaluate the potential of chemical and biological warheads for the PERSHING missile.

INITIATION: 3Q62.

COMPLETION: 4Q62.

STATUS: The project directive was sent to OCCmlO on 13 November. By correspondence of 30 November 1961, OCCmlO directed that this study project be limited to the consideration of chemical agents only. Although work is progressing using chemical warhead data only, a firm knowledge of the objective and scope of this study project will be lacking until OCCmlO acts on the draft of the proposed project directive submitted 13 October 1961. This project is on schedule at present, but action on the project directive by OCCmlO is needed.

MANHOURS THIS QUARTER: 309.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 31 December 1961

NUMBER AND TITLE OF PROJECT: CMLCD 62-22, Requirements for Chemical and Biological Warheads for the NIKE-HERCULES Missile (U).

PROJECT OFFICER: Lt Smith.

OBJECTIVE: To determine if a warhead requirement exists for chemical and biological warheads for the NIKE-HERCULES missile.

INITIATION: 2Q62.

COMPLETION: 4Q62.

STATUS: A draft of the proposed project directive was sent to OCCml0 on 13 November 1961 and to date no comment from OCCml0 has been received. Approval of the project directive by OCCml0 is needed by 15 January 1962. This project is on schedule.

MANHOURS THIS QUARTER: 260.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLCD 62T31

TITLE OF PROJECT: Field Experiment, Estimation of Casualty Effects Due to Surprise Chemical Attack, and Significance of Protective Mask Leakage, Short Title: "SAMPLES"

PROJECT OFFICER: Captain Coe

OBJECTIVE: 1. To obtain information which will improve the prediction of probable casualty effects resulting from surprise attacks with chemical agents such as GB.
2. To determine the extent of leakage of the current army protective masks under operational conditions and to estimate the military significance of such leakage under plausible warfare conditions involving the use of chemical and biological anti-personnel agents.

INITIATION DATE: 4QFY62

ESTIMATED DATE OF COMPLETION: 2QFY63

STATUS: The development phase of this test began on 9 October 1961 with a visit by the project officer to CCB and DMO to seek additional background data on the test and to gather information of field testing procedures. After drafting and coordinating the project directive with all participating agencies (CRDL, Bio Labs, and CmlC Tng Comd), the directive was approved by DMO and issued on 28 November 1961. The test directive was informally coordinated with all participants and was issued by FRA on 15 December 1961. Close coordination by the project officer with CRDL, Bio Labs, and CmlC Tng Comd has resolved many of the problem areas inherent in field test work. Supplies and facilities required for the test will for the most part be furnished by CRDL and the Bio Labs at no cost to this Agency. CmlC MATCOM is being authorized by OCCmlO to furnish 200 M17 masks to FRA on a loan basis. Additional laboratory equipment not available at the CmlC School is being purchased with FRA testing funds. Human Resources Research Office, George Washington University, has agreed to assist FRA in the test design. The project officer plans to visit HUMRRO 8 and 9 January 1962 to work out the final design and will then visit CRDL and Bio Labs for the purpose of coordinating this phase of the test program. It is planned to issue the detailed plan of test on or before 1 February 1962. Extensive coordination with the CmlC Tng Comd on all logistical and administrative support requirements is continuing. It is expected that the testing will start on or about 20 March 1962 and will be completed by 1 May 1962.

MAN-HOURS EXPENDED DURING QUARTER: 628

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLFR-1

TITLE OF PROJECT: Comments, Reviews, Conferences, and Contributions to Doctrine (U)

PROJECT OFFICERS: Lt Col Reagan, Lt Col Stephens, and Lt Col Furches (as division chiefs).

OBJECTIVE: To insure that approved CBR doctrine and/or tentative concepts of CBR are made known to agencies within the DA by means of comments on publications, films, studies, etc., or by original contributions.

COMPLETION: Continuing project.

STATUS:

1. Reviewed and (where appropriate) made comments on the following reports, studies, drafts, and other documents:

   a. Draft Army Regulations: AR 604-5 (Review), "Investigation and Clearance of Personnel for Handling Cryptologic, TOP SECRET, SECRET, and CONFIDENTIAL Material and Information."

   b. Draft DA Field Manuals or revisions thereof: FM-21-40, "Small Unit Procedures in Nuclear, Biological, and Chemical Warfare"; FM 21-41, "Soldiers Handbook for Chemical and Biological Operations and Nuclear Warfare"; FM 21-48 (Changes 2), "Chemical, Biological, and Nuclear Training Exercises and Integrated Training."

   c. Draft DA Technical Manuals or revisions thereof: TM 3-215, "Military Chemistry and Chemical Agents"; TM 3-350 (Changes 1), "Improvised CBR Protection Shelters"; TM 3-6665-212-12, "Detector Kit, Chemical Agent, M18A1."

   d. Draft DA Technical Bulletin: TB CML 92, "Calculator, Nuclear Yield, M4."

   e. HQ USCONARC: "QMR for Nuclear Warhead Sections for Missile B."

f. Office of Special Weapons Development: Draft report, Study OSWD 61-2, "Effects of Electromagnetic Radiation from Non-Nuclear Sources on Nuclear Weapons (U)."

g. USA Infantry Board: "Revised QMR for System, Marking, Detection, and Identification (U)."

h. U. S. Army Intelligence Board: paper on "Intelligence Raid Teams."

i. US Army Aviation School: "QMR for an Aerial Delivery System for Smoke and Flame (U)."

j. US Army Engineer School: "Corps of Engineers Roles and Missions Study (U)," Phase I.

k. Office, Chief Signal Officer: DA, study, "Concepts and Equipments for U. S. Army Tactical Communications (U)."

l. US Army Electronic Proving Ground: Study SIGCCD 59-8, "Field Army Emergency Warning System (U)," Phase II.

m. US Army Quartermaster Board: Study QMCCD 56-9 (QMB Project Nr 25), "Graves Registration Operations under Concepts of Future Warfare."

n. US Army Medical Service Combat Development Group: "ADPS Feasibility Study: Medical Information and Intelligence in the Field Army (U)."

o. US Army Transportation Corps Combat Developments Group: Study TCCD 62-12 (SP), "Hot-Air Balloon Concept in Army Logistic Application."

p. US Naval Radiological Defense Laboratories: "USNRDL Technical Program for Fiscal Years 1962 and 1963."

q. Office of the Chief Chemical Officer, DA, papers on the following subjects: "Suggestion for Improved Larger-Area Decontaminator"; Employee Suggestion No. C163-61, "Descriptions of Positions for Military Personnel"; "Format for Combined QMR's and MC's" (for HQ, USCONARC); Plan of Test of Project No. ATB 3-222, "Service Test of HYCAR

Absorbent Protective Underwear"; RDT&E Project Card, "CBR Support for Army Aviation"; "Revised QMR for Heavy Anti-tank/Assault Weapon System (Long Range)"; "QMR/MC's for Dissemination System, Chemical Agent, Lethal and Incapacitating"; and "Long-Range Technical Forecast."

r. US Army CmlC Training Command: Draft Circular 624-2, "Appointment and Reduction of Enlisted Personnel."

s. US Army CmlC School: "Commanders' Guide for Employment of Chemical and Biological Weapons."

t. US Army CmlC Operations Research Group: paper with short title, "Project 112."

u. US Army CmlC Biological Laboratories: Draft Technical Memorandum, "Line Source Charts."

v. US Army CmlC Board: "Revised Draft QMR for a Biological Warhead for the PERSHING Missile (U)"; and Draft No. 3, "A Simplified Method of Determining Casualty Effects with Multiple Point Source Bomblets (U)."

w. U. S. Army CmlC Tripartite CBR Standardization Representative, ACC, Md: Draft STANAG No. 2103, "Reporting Nuclear Detonation, Radioactive Fallout, and Chemical and Biological Attacks"; and "Military Characteristics for the Respirator, Anti-Gas, S.R. 6."

x. Senior CmlC Standardization Representative, US Army Standardization Group, Canada: "Quarterly Information Letter 3/60 (U)."

y. Blue Sky Suggestions, as follows: BSS 61-73, "Aerial Survey of Radiologically Contaminated Areas"; BSS 61-121, "Radioactive Detection"; and BSS 61-123, "A Device for Dissemination of Liquid Chemical Agent."

2. Reviewed Training Film, "Operations of the CBRE," prepared by US Army Chemical Corps School.

3. Developed a plan for operational evaluation and maintenance of the E41 Alarm, as requested by OCCMLO.

4. Prepared Military Characteristics for a VX Warhead for the Improved HONEST JOHN Rocket, as requested by OCCmlO.

5. Prepared answers to two questionnaires: "Operations Research in the Chemical Corps," requested by US Army CmlC Operations Research Group; and "Training in Operations Research Methods for Army Logistics Research Personnel (RCS LOG) ALMC-(OT)-1)," requested by OCCmlO for US Army Logistics Management Center.

MAN-HOURS EXPENDED THIS QUARTER:

	1a	1b	1c	1d	1e	1f	TOTAL
Cml Division	—	—	63	330	94	120	607
Biol Division	—	182	94	34	139	24	473
Radl Division	158	4	13	14	100	—	289
Documentation Off	4	2	4	14	15	4	43
Office of the CO	—	20	58	1	—	4	83
TOTALS	162	208	232	393	348	152	1495

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

2 January 1962

NUMBER OF PROJECT: CMLFR 3-62

TITLE OF PROJECT: ROAD 4.2" Mortar Capability

PROJECT OFFICER: Major Armstrong

OBJECTIVE: To determine the operational usefulness of the 4.2" mortar in the ROAD organizations when given a more extensive ammunition capability.

INITIATION: This project was initiated in the 2nd quarter of FY 1962.

COMPLETION: This project was completed in the 2nd quarter of FY 1962.

STATUS: This was a special project directed by the Chief Chemical Officer. The study was completed on time and was well received by OCCmlO. No unusual problems were encountered. Because of the short suspense date only internal coordination was performed; however, informal views were obtained from the Infantry School.

MAN-HOURS EXPENDED DURING QUARTER: 108

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-1

TITLE OF PROJECT: Planning and Scheduling of Combat Developments Projects (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To program and schedule the development of combat development study and test projects by this Agency, in conformance with guidance and directives from OCCml0, and to develop requirements for personnel, funds, and other resources to carry out the Agency's program.

COMPLETION: Continuing project.

STATUS:

1. The official Chemical Corps Operating Program for Fiscal Years 1962-1966 (Target Year FY 1962) was received on 1 November 1961 under cover of letter, CMLPE, OCCml0, dated 1 September 1961. Section I of Part 5a (Combat Developments), Annex C, included the same projects for CCFRA as were listed in the draft forwarded on 3 July 1961 (for which see Quarterly Progress Report on this project dated 30 September 1961). Previous changes to this program had resulted in the following schedule for CCFRA in FY 1962:

	Studies	Tests	TOTAL
Previously initiated:	14	0	14
To be initiated & completed in FY 1962:	4	0	4
To be initiated in FY 62 & completed in FY 63:	3	2	5
TOTAL	21	2	23

2. During the second quarter, one project was cancelled (CMLCD 62-10) and one was changed from Phase I of a test project (63T6) to a separate study (62-19). The current schedule is therefore as follows:

	Studies	Tests	TOTAL
Previously initiated:	14	0	14
To be initiated & completed in FY 62:	4	0	4
To be initiated in FY 62 & completed in FY 63:	3	1	4
TOTAL	21	1	22

3. The CCFRA Operating Program document was issued on 13 October 1961. No changes to it had been issued by the end of the quarter.

4. Letter, CMLMO-CD, OCGm10, 7 Dec 1961, subject: "Combat Development Five Year Program," directed CCFRA to recommend (in draft form by 1 Feb 62; final proposals by 1 Mar 62) changes and additions to the CmlC combat development program, including extension of projects through FY 1967, together with estimatesof funds required for FY 1963 and 1964. Division chiefs were requested to submit recommendations and workload data to the Program Coordinating Officer by 12 Jan 1962.

MAN-HOURS EXPENDED DURING QUARTER: 256.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-2

TITLE OF PROJECT: Analysis and Abstracting of Reports, Studies, and Publications (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To review, evaluate, and (where indicated) abstract documents circulated within the Agency with a view toward their possible use in the development of doctrinal, operational, organizational, logistical, or materiel concepts.

COMPLETION: Continuing project.

STATUS: 1. The following abstracts were prepared and processed during the past quarter:

	Backlog from 1st Qtr	Received in 2nd Qtr	Processed in 2nd Qtr	Backlog Unprocessed
Cml Division	2	36	21	17
Biol Division	3	12	11	4
Radl Division	5	64	54	15
Documentation Off	0	21	14	7
TOTALS	10	133	100	43

2. The abstracts submitted to the Documentation Office were checked for accuracy and format, typed, circulated for information, and filed. At the end of the quarter, about 16,825 abstract cards were on file, representing abstracts of 4,807 individual documents.

3. Lt Filipkowski (substituting for Mr. Wilson) represented CCFRA at a conference in the Technical Information and Evaluation System (TIES) program, held at OCCmlO, 11 and 12 December 1961. The Agency reviewed the proposed CmlC "Thesaurus of Descriptors" and submitted proposals for additions to it, as requested by CmlC R & D Command.

MAN-HOURS EXPENDED DURING QUARTER:

Gml Division	563
Biol Division	948
Radl Division	579
Documentation Office	123
Office of the CO	135
TOTAL	2,348

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-3

TITLE OF PROJECT: Army Doctrinal Guidance Statements (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To assist the CG, USCONARC, in generating new or changed doctrine.

COMPLETION: Continuing project.

STATUS: A committee consisting of the Deputy Commander, the Scientific Advisor, the Program Coordinating Officer, and the chiefs of divisions was appointed for the purpose of reviewing completed projects and formulating doctrinal guidance statements for inclusion in FM 100-1. The committee did not meet in this quarter.

MAN-HOURS EXPENDED THIS QUARTER: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 31 December 1961

NUMBER OF PROJECT: CMLIP-4

TITLE OF PROJECT: Instructional Presentations and Assistance to Chemical Corps School

PROJECT OFFICER: Not applicable

OBJECTIVE: To properly prepare and present instructional presentations and to give assistance to the Chemical Corps School.

COMPLETION: Continuing project

STATUS: During the week of 9-13 October 1961, Lt Col Richard A. Munn, Jr, Biological Division, and Maj Andrew J. Armstrong, Radiological Division, participated as controllers on CPX for students in the Associate Career Course. Lt Col Munn functioned as the controller for armor and cavalry units; Major Armstrong functioned as the Operations Deputy to the Chief Controller.

In November, Lt Col Munn assisted Lt Col J. L. Keown (Combat Arms Section, Military Arts Division, Chemical Corps School) in preparing a portion of his presentation for the World-Wide Chemical Officers' Conference. This entailed preparing that portion of Lt Col Keown's presentation pertaining to future Chemical Corps organization, particularly the concept of a combined rocket and smoke generator battalion. Lt Col Brigden, of the Chemical Division, FRA, assisted in this, and they were both present to represent FRA at the rehearsals for the presentation.

MAN-HOURS EXPENDED DURING QUARTER: 111

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-5

TITLE OF PROJECT: Program Review and Analysis (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To appraise the effectiveness of the Agency's accomplishments in relation to its program, by measuring progress toward scheduled objectives and determining economy and efficiency in the use of resources, and to recommend corrective action wherever it is required for improvement.

STATUS:

1. Review and Analysis presentation (oral) for the 1st Quarter, FY 1962, was made to the Commanding Officer, CCFRA, on 20 October 1961.

2. Special report to Director for Military Operations, OCCmlO, on status and progress of all CMLCD projects as of 30 September 1961, with estimated completion dates of all those not yet completed, was submitted on 17 October 1961.

3. Historical report for the 1st Quarter, FY 1962, was submitted to the CmlC Historical Office (with copy to OCCmlO, less Annex A, progress reports) on 13 November 1961.

MAN-HOURS EXPENDED THIS QUARTER: 266.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-6.

TITLE OF PROJECT: Recruitment of Professional Civilian Personnel (U).

PROJECT OFFICER: Dr. Gardner.

OBJECTIVE: To expedite the process of hiring professional civil service employees to fill vacancies (GS-12 and above) in the Agency, by means outside the routine civilian personnel employment channels.

INITIATION: 16 October 1961.

COMPLETION: Continuing project.

STATUS:

1. The project officer consulted with the Civilian Personnel Officer, Fort McClellan, on the possibilities of using commercial advertising and direct contact with university placement bureaus as means of reaching prospective candidates who might otherwise not be aware of the existing vacancies. A conference was also held at which representatives of CCFRA, Hq US Army CmlC Training Command, and the Ft McClellan Civilian Personnel Office discussed this problem.

2. One candidate has made formal application for the position as Biologist and one for a position as Chemical Operations Specialist. The latter would, if appointed, succeed Mr. Mahaffie, who is resigning effective 28 February 1962. Because of the "freeze" ordered by OCCmlO, no action has been taken on these applications.

MAN-HOURS EXPENDED THIS QUARTER: 70.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-7

TITLE OF PROJECT: Means of Delivery and Dissemination of Chemical and Biological Agents (U)

PROJECT OFFICER: Dr. Gardner

OBJECTIVE: To develop concepts for means of delivery and dissemination of chemical and biological agents against suitable targets.

COMPLETION: Continuing project.

STATUS: No action this quarter. Desired concepts will be developed as the opportunity occurs.

MAN-HOURS EXPENDED THIS QUARTER: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-9.

TITLE OF PROJECT: Army Organization (U)

PROJECT OFFICER: Lt Colonel Munn

OBJECTIVE: To facilitate the accomplishment of the Agency's combat development study program by assembling, analyzing, and correlating the various plans, studies, and other documents specifically related to Army organization, and by providing up-to-date information on this subject to the operational elements of the Agency.

INITIATION: 1 April 1960.

COMPLETION: Continuing project.

STATUS: 1. No presentations were made to the Agency, since Lt Col Keown (Combat Arms Br, Mil Arts Div, CmlC Sch) made a comprehensive presentation to all project officers of FRA on the ROAD concept during the quarter.

2. Project Officer departed on PCS on 27 December 1961.

MAN-HOURS EXPENDED DURING QUARTER: 8.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 31 December 1961

NUMBER OF PROJECT: CMLIP-10

TITLE OF PROJECT: Background Information for FRA Projects (U)

PROJECT OFFICER: Dr. Gardner

OBJECTIVE: To collect, organize, and catalog background information related to FRA studies in order to place these studies in their proper perspective.

COMPLETION: Continuing project.

STATUS: No action this quarter. The notebook will be revised when new projects are added to the program, and/or when new information is received on current projects.

MAN-HOURS EXPENDED THIS QUARTER: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)

1 October - 31 December 1961

ANNEX B

REPORTS OF TEMPORARY

DUTY TRAVEL

U.S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 17 October 1961

MEMORANDUM FOR RECORD

SUBJECT: Report for TDY

1. Number of days TDY: 5 (9-13 October 1961).

2. Place of visit: Office of the Chief Chemical Officer, Washington, D.C.; U.S. Army Chemical Corps Board and Chemical Research and Development Laboratories, Army Chemical Center, Maryland; U.S. Army Biological Laboratories, Fort Detrick, Maryland.

3. Person performing travel: Captain G.B. Coe, Chemical Division.

4. Purpose of visit: To seek additional background data and guidance for conducting combat development project CMLCD 62T3[illegible], Field Experiment, Estimation of Casualty Effects Due To Surprise Chemical Attacks, and Significance of Protective Mask Leakage. (Project SAMPLES).

5. Persons contacted:

a. Office of the Chief Chemical Officer:
Major Jon J. Sugrue
Major John Callanan
Mr. S. Waxman
Mr. W. Fox

b. U.S. Army Chemical Corps Board:
Col E.A. Lewis
Dr. E.W. Hollingsworth
Mr. E.L. Sawyer
Mr. J.F. Schaeffer

c. U.S. Army Chemical Research and Development Laboratories:
Dr. B.L. Harris
Capt V. Yusos
Mr. M.E. Penn
Dr. F.N. Craig

d. U.S. Army Biological Laboratories:
Dr. C.R. Phillips
Mr. W.L. Jacobs
Mr. H.M. Decker

6. Discussion and Accomplishments: The needs of the Field Requirements Agency for additional data in order to conduct the field experiments were discussed with personnel in the Office of the Chief Chemical Officer on 9 and 10 October 1961. During this discussion, additional background data were developed so that it is now possible to more clearly define the parameters of the project. The objectives, scope, and justification for the two phases of the experiment are as follows:

a. Estimation of Casualty Effects Due to Surprise Chemical Attacks.

(1) Objective: To obtain information which will improve the prediction of probable casualty effects resulting from surprise attacks with chemical agents such as GB.

(2) Scope: The field experiments would involve largely the subjection of possibly platoon-size troop units under various operational conditions to simulated chemical attacks while wearing a breathing pattern apparatus which records the breathing pattern as a function of time, and an oronasal mask which together permit a quantitative determination of the amount of inhaled simulated agent during the time of functioning of the first munition until the mask is properly donned. From this information computation would be made of the corresponding percentage casualties for various simulated operational conditions and types of GB attacks. The necessary quantities of the breathing apparatus are available from the CARAMU investigation.

(3) Justification: To better predict probable casualty effects of surprise chemical attacks, it is necessary to obtain more definite information on individual reactions, particularly during the first minute of such attacks, in order to estimate breathing patterns of the individuals and to estimate how rapidly and how well the individuals will don their mask under the distracting influences of the attack. A better knowledge of the individual reactions combined with information on the surrounding concentrations of agent for a specific set of conditions would provide a basis for estimating probable casualties. It is generally recognized that a true simulation of a chemical attack, particularly the important fear of death and panic possibilities, cannot be simulated short of actual exposure in combat. Nevertheless, it is probable that field experiments could provide worthwhile information on the subject and possibly indicate at least the minimum casualty effects.

b. Significance of Protective Mask Leakage.

(1) Objective: To determine the extent of leakage of the current army protective masks under operational conditions, and to estimate the military significance of such leakage under plausible warfare conditions involving the use of chemical and biological antipersonnel agents.

(2) Scope: The experiment probably would consist mainly of subjecting masked platoon or company size troop units to simulated chemical or biological agent environments and measuring the percentage leakage under

various simulated operational conditions. Representative of such operational conditions would be accomplishment of typical tasks such as assaulting an enemy position, digging in a defensive position, sleeping, and the effect of beard growth. The agent simulant would be innocuous to permit its unrestricted use at any selected location, and might consist of nonpathogenic biological agents of fluorescent aerosol particles. After determining the incidence and amount of leakage under various conditions, computations would be made to translate the leakage into casualties assuming plausible environments of chemical and biological agents in time of war.

(3) Justification: Present information on the leakage of protective masks is based on essentially laboratory or test chamber conditions where the masks usually are carefully fitted by experts, and in which the activity of the subjects is highly limited. Even under these ideal conditions, there is evidence that mask leakage may be militarily significant under some realistic field concentrations of agents. It is desirable to obtain estimates of the probable casualty effects when the personnel of units under various operational conditions wear their masks continuously while in plausible field environments of chemical and biological agents. Such information would be useful in estimating the general protective adequacy of the current masks after donning when used under realistic field conditions. In addition, useful information would be obtained on the possible need for further research and development to reduce mask leakage, and on field procedures to minimize leakage with current masks.

7. On 11 and 12 October 1961, informal meetings were held at the Chemical Corps Board and Chemical Research and Development Laboratories. The purpose of these meetings was to gain knowledge on test procedures, equipment and candidate simulant agents, expansion of test objective and drafting of the project directive. During the course of these meetings, the advisability of bringing this testing program to the attention of personnel at Fort Detrick was discussed. It was agreed that it would be highly beneficial to the development of future plans, so consequently the Chief of the Physical Defense Division, Biological Laboratories, was briefed on the objectives and scope of the project on 13 October 1961. Upon return to the Chemical Corps Board on this date, a rough draft of the project directive was prepared. In addition, copies of test directives and background data on the CARAMU program were obtained.

8. Current and Future Plans:

a. Initial contact will be made immediately with the Chemical Corps Training Command in which the objectives and scope of the test will be explained. In addition, it is hoped that troop availability, numbers required, time of testing and general CCTC areas of responsibility will be discussed.

b. The project directive will be prepared in draft form and staffed within this Agency and the Chemical Corps Training Command. Upon completion of this staffing, the project officer will hand-carry the draft directive to the Office of the Chief Chemical Officer, RADCOM, CRDL, Biological Laboratories,

and the Chemical Corps Board. After this informal staffing, the directive will be prepared in final form and hand-carried to the Office of the Chief Chemical Officer for approval. Definitive planning by other Chemical Corps Agencies cannot be accomplished prior to publication of the project directive. Target date for this action is 15 November 1961. Tentative schedule calls for conduct of the test during the period of March, April, or May at Fort McClellan, Alabama.

c. A log containing pertinent information is being kept by the project officer.

GEORGE B. COE
Capt, Cml Div

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-B 1 November 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is made:

1. Number of days on TDY: 13 (15 Oct 61 - 27 Oct 61).

2. Place of visit: Aerojet - General Corporation, Aeronautical Division, Downey, California.

3. Person performing travel: Dr. Donald F. Restool, GS-14, U. S. Army Chemical Corps Field Requirements Agency, Fort McClellan, Alabama.

4. Purpose of visit: To attend Drone Training Program conducted by Training Section of Aeronautical Division, Aerojet - General Corporation.

5. Persons contacted:

a. Lt Col Louis J. Stephani, Chief Combat Development Div, OCCmlO.

b. Mr. M. E. Wood, Chief Project Engineer, Aerojet.

c. Mr. Norbert Koenig, Chief Development Engineer.

d. Mr. R. L. Saley, Manager, Customer Relations.

e. Mr. R. Hannegan, Customer Relations.

f. Mr. M. D. English, Manager, Product Support Dept.

g. Mr. S. Corenson, Supervisor, Training Section.

h. Mr. W. M. Sheldon, Staff Instructor.

i. Mr. R. P. Dubois, Staff Instructor.

j. Mr. A. L. St. Clair, Staff Instructor.

k. Mr. L. A. Jones, Staff Instructor.

l. Mr. S. J. Parobok, Staff Technician.

CMLFR-B 1 November 1961
SUBJECT: Report of TDY

6. Report: (NOTE: An oral report was given to CO and Staff, FTM, at 0830 hours on 30 October 1961).

a. Drone Training Program:

(1) The two week's course consisted of the following units:

(a) Introduction to the drone and to the associated operations and equipment (descriptive data, ground support equipment, operational concepts, and familiarization with drone structure, module bay, landing impact device, and module components).

(b) Introduction to types of shipping containers.

(c) Discussion of electronic flight control.

(d) Examination.

(e) Handling and working with module materials.

(f) Detailed assembly, disassembly, etc., of modules in the drone. Handling of loading equipment, check out, theory, and practice, and examination.

(g) Review and final examination.

(2) In general, the course was conducted in an excellent manner. Student participation was high. In fact, the students became so proficient that they were able to offer numerous suggestions for improved future drones and handling equipment.

b. Liaison:

(1) Lt Col Stephani and I were able to meet several times with Aerojet personnel, especially the drone engineers. These meetings led to better understanding on my part of problems in drone development. An understanding of these problems is of great value in the preparation of CMLCD 62-7.

(2) Lt Col Stephani and I discussed Project CMLCD 61-9 (Organizational and Operational Concepts of a Biological Rapid Warning System). The initial draft had been transmitted to his office during his absence. He expressed general agreement with the study concepts.

CMLFR-B
SUBJECT: Report of TDY

7. Action required: The knowledge and experience gained at the drone course will be of great advantage in the preparation of Project CMLCD 62-7.

Donald F. Restool
DONALD F. RESTOOL
Biologist
Biological Division

U.S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 9 November 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY - Captain Julian E Buckner

1. Number of days TDY: 15 (21 Oct - 5 Nov 1961).

2. Place of visit: Ordnance Management Engineering Agency, Ordnance Weapon Command, Rock Island Arsenal, Illinois.

3. Person performing travel: Captain Julian E. Buckner

4. Purpose of visit: To attend the course "ADPS for Systems Analysts" given by OMETA. This course is designed to give systems analysts and management personnel a basic background in the practical and potential application of ADPS.

5. Person contacted: NA

6. Accomplishment of TDY travel:

a. Attended course.

b. The course was extremely informative and interesting. All ADPS applications were slanted towards logistical and business type operations; therefore, no information was furnished concerning the potential application of ADPS to field or tactical operation.

7. Recommendations: That additional personnel of this Agency that may require a basic background of ADPS be sent to OMETA in the future.

Julian E. Buckner
JULIAN E BUCKNER
Capt, CmlC

U.S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 1 November 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Number of days TDY: 4 (24-27 October 1961).

2. Place of visit: U.S. Army Chemical Corps Board and Chemical Research and Development Laboratories, Army Chemical Center, Maryland; U.S. Army Chemical Corps Biological Laboratories, Fort Detrick, Maryland; Office of the Chief Chemical Officer, Washington 25, D.C.

3. Person performing travel: Captain G.B. Coe, Chemical Division.

4. Purpose of visit: To attend LUG NUT conference at U.S. Army Chemical Corps Board and to coordinate project directive for CMLCD 62T31.

5. Persons contacted:

a. U.S. Army Chemical Corps Board

Mr. J.F. Schaeffer
Mr. E.L. Sawyer
Dr. E.W. Hollingsworth

b. U.S. Army CmlC Operations Research Group

Dr. George Mille

c. U.S. Army Chemical Research and Development Laboratories

Mr. W.J. Wiseman
Dr. B.L. Harris
Mr. Jacob Chernack
Capt V. Yuses

d. U.S. Army Chemical Corps Biological Laboratories

Dr. C.R. Phillips

e. U.S. Army Chemical Corps Research and Development Command

Mr. D.S. Liberman
Mr. Irving Cort

f. Office of the Chief Chemical Officer

Mr. L.W. Carlson
Mr. S. Waxman
Mr. I.B. Morgan

6. Discussion and accomplishments:

a. The Commanding Officer of this Agency was briefed on 30 October 1961 on the LUG NUT conference.

b. A draft project directive for field experiment 62T31 (Project SAMPLES), prepared by this Agency, was coordinated with the above-listed personnel. Some minor changes were made by Mr. Carlson, Office of the Comptroller, in the paragraph regarding funding. Mr. Waxman indicated that Concept Development Branch, OCCmlO, may have a few minor comments and if so, he would bring these with him when he visits this Agency on 1 or 2 November. All Chemical Corps agencies contacted have concurred in the project directive as written.

7. Current and Future Plans:

a. The draft project directive will be coordinated with the U.S. Army Chemical Corps Training Command and then forwarded to OCCmlO for approval.

b. Preparation of the detailed test directive will start immediately. It is visualized that this phase of the test program will require approximately forty-five days (15 Dec) for completion. Many parts of this phase will have to be supplied by CRDL, Biological Laboratory, and Training Command.

George B. Coe
GEORGE B. COE
Capt, CmlC

UNITED STATES ARMY
CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
FORT McCLELLAN, ALABAMA

CMLFR-R 15 November 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 1 (14 Nov 1961)

2. Place of visit: The U. S. Army Infantry School,
Fort Benning, Georgia

3. Person performing travel: Major A. J. Armstrong

4. Purpose of visit: To discuss the "ROAD 4.2" Mortar Capability", CMLFR 3-62.

5. Persons contacted:

a. Weapons Department, The U. S. Army Infantry School.

(1) Lt Col Guenthner

(2) Lt Col Shirley

b. Mortar Committee, Weapons Department, The U. S. Army Infantry School.

(1) Lt Col Wright

(2) Maj Murray

(3) Capt Green

c. Command and Staff Department, The U. S. Army Infantry School.

(1) Lt Col Blackwell

(2) Maj Maloney

6. Discussion and accomplishments:

a. The Mortar Committee is concerned with the training and techniques of operation of the mortar crews and FDC. The problems associated with the handling of ammunition, FDC procedures, massing of fires, registration, and transfer of fires were discussed. The conclusions were that no difficulties in firing chemical ammunition were anticipated if adequate firing tables were available.

b. The Command and Staff Department is concerned with tactics and logistics. The problems of tactically employing chemical ammunition were discussed and conclusions were that adequate training, SOP's, and communications would solve any incipient difficulties.

c. Professional opinions were sought from all the officers listed in paragraph 5. All prefaced their remarks with the statement that they were expressing their own views and not the doctrine of the School. Since the proposal is a new capability, the Infantry School has no doctrine. The consensus was that a chemical capability for the 4.2" mortar was highly desirable. However, none of the officers wanted to carry the chemical ammunition in the basic load. The reasons for this were that insufficient transportation exists in the battalions for the mortar platoon to carry the current basic load. The feeling was that the basic load of HE currently authorized was barely adequate. All of the officers felt that even if they did have the means to carry chemical ammunition, they would not have the authority to fire. They visualized that they might have to carry chemical ammunition for an entire campaign and never fire any of it. Further, all the officers expressed concern over control of chemical ammunition. None of the officers would put the ammunition at the mortar positions until ready to fire. All the officers recommended that chemical 4.2" ammunition be kept at mobile ASP's with provisions for rapid issue and unit distribution when authority was received to fire.

No other adverse comments were made on the rough draft.

Andrew J. Armstrong
ANDREW J ARMSTRONG
Major, CmlC

RADIOLOGICAL DIVISION
US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

MEMO FOR RECORD 24 November 1961

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 7

2. Place of visit: USA CBR Weapons Orientation Course, Dugway Proving Ground, Utah

3. Person performing travel: Lt Col L. B. Stephens

4. Purpose of visit: To attend CBR Weapons Orientation Course No. 8-62, as a member of the Academic Advisory Board of such course and to review with other members of the Board the material being presented and the manner in which it was presented.

5. Personnel contacted:

Col Paul R. Cerar, Course Director
Lt Col Thomas E. Marfin, Director of Instruction and his instructor staff.

6. Accomplishment of TDY:

Attended CBR Weapons Orientation Course No. 8-62, 14 - 17 November 1961, as a member of the Advisory Board. Suggestions and recommendations for improvement of the course were submitted to the course director and his staff in an exit interview on 17 November 1961.

7. Action required:

As a member of the Academic Advisory Board to the CBR Weapons Orientation Course, the undersigned is responsible to keep the course director advised on new approved concepts as they are developed by FRA.

LOUIS B. STEPHENS
Lt Col., CmlC

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFL-D 21 November 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is made:

1. Number of days on TDY: 1 (21 Nov 1961).

2. Place of visit: HQs, Army Ballistics Missile Agency, Redstone Arsenal, Alabama.

3. Persons performing travel: Capt T. R. Roark and 2d Lt L. D. Ohnstad, USA CmlC Field Requirements Agency, Ft McClellan, Ala.

4. Purpose of visit: To attend conference on the PERSHING missile at 1000 hours, Room C128, Bldg 4488, reference MFR, 17 Nov 1961, regarding telecon, Major Callanan and Mr. Wasman to Colonel Babcock:

> "2. Major Callanan informed Colonel Babcock that there would be a conference on the PERSHING missile on 21 Nov 1961 at Redstone Arsenal, in Room C128, Bldg 4488, at 1000 hours. The message that set up the meeting was TWX ORD AB-RLW 172-61. He stated further that the security clearance of the representative should be addressed to: ORDDW-BIB. Funds to be furnished by Field Requirements Agency. Report of TDY or minutes of the meeting should be provided OCCmlO and the Board."

5. Persons contacted: See attached list.

6. Report:

a. A brief oral report was given Lt Col Reagan by Capt Roark. All material presented is forthcoming in two reports by the Martin Company (OR 1728-1 and OR 1728-2). Three copies each of these documents will be sent to FRA by the ABMA, Redstone Arsenal.

b. Liaison: Contact was established with company engineers and with CmlC R & D Labs and Biological Labs.

CMLFR-B 24 November 1961
SUBJECT: Report of TDY

7. Action required:

a. Information in these reports will be used to help complete CMLCD Projects 62-20 and 62-21.

b. Copies of reports will be forwarded to OCmlO and OCB.

THOMAS R. ROARK, Capt, CmlC
Biological Div
Project Officer

LAWRENCE D. OHNSTAD, 2d Lt, CmlC
Biological Division
Ass't Project Officer

Incl 1
List of Attendees

BW & CW WARHEAD MEETING
R&D Conference Rm.
21 November 61

ATTENDEES	AGENCY
Will A. Lewis	ORDAB-R
A. J. Finzel	ORDAB-RL
W. P. Young	ORDAB-RL
D. W. Sheridan	ORDAB-RLW
J. J. Milly	ORDAB-RT
M. E. Lanier	ORDAB-RG
E. B. Harwell, Jr.	ORDAB-RA
Lt R. R. Sorrell	ORDAB-CB
Lt R. E. Paulus	ORDAB-CS
Lt A. L. Johnston	ORDAB-CS
J. M. Barney	Martin - Orlando
L. Arnowitz	Martin - Orlando
James F. Hall	Martin - Orlando
Walter L. Steele	Martin - Orlando
William A. Buss	Martin - Orlando
Donald G. Miller	Martin - Orlando
Charles R. Belton	Martin - Orlando
John L. Kratzer	Chem R&D Labs, Army Chem Cen., Md.
2d Lt Lawrence D. Ohnstad	US Army CmlC, Field Rqr Agcy, Ft McClellan
Capt T. R. Roark	US Army CmlC, Field Rqr Agcy, Ft McClellan
G. A. DeShazer	B. L., Fort Detrick

Incl 1

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 5 December 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Number of days TDY: 5 (27 November - 1 December 1961).

2. Places of visit: U. S. Army Chemical Corps Board and Chemical Research and Development Laboratories, Army Chemical Center, Maryland; U. S. Army Chemical Corps Biological Laboratories, Fort Detrick, Maryland; Human Resources Research Office (HUMRRO), George Washington University, and Office of the Chief Chemical Officer, Washington 25, D. C.

3. Person performing travel: Capt G. B. Coe, Chemical Division.

4. Purpose of visit: To coordinate test directive for CMLCD 62T31.

5. Persons contacted:

a. U. S. Army Chemical Corps Board.

Mr. J. F. Schaeffer

b. U. S. Army Chemical Research and Development Laboratories.

Col D. Lindsey
Mr. W. J. Wiseman
Dr. B. L. Harris
Mr. Jacob Chernack
Capt V. Yuses
Dr. F. Craig

c. U. S. Army Chemical Corps Biological Laboratories.

Dr. C. R. Phillips
Capt J. C. Kirsch
Mr. H. M. Decker
Mr. D. W. Falconer

d. Human Resources Research Office (HUMRRO).

Dr. Arthur J. Hoehm
Dr. James Goffard

e. Office of the Chief Chemical Officer.

Maj J. J. Sugrue
Maj J. Callanan
Mr. S. Waxman

6. Discussion and Accomplishments:

a. The draft test directive for field experiment 62T31 (Project SAMPLES) prepared by this Agency, was coordinated with the above-listed personnel. Participating agencies will forward information for inclusion in the directive prior to 15 December 1961, the date scheduled for issuing the directive in final form.

b. The responsibility for evaluating the UVINUL was discussed with Dr. Harris at CRDL. Due to shortage of personnel, they will be unable to support us in this area. The Chemical Corps Board is conducting a field experiment at Fort McClellan during February 1962, in which a fluorescein particulate will be used as a simulant chemical agent. To evaluate this simulant, the Chemical Corps Training Command will send approximately 10 soldiers to CRDL for three weeks' training. Since the technical procedures involved are similar to those required for the UVINUL, I requested permission from Lt Col Marrero, Chemical Corps Board, and Dr. Harris, CRDL, to have the group remain at ACC for a few days to receive this extra training. Both representatives agreed to this request. It was further suggested that these same individuals could go to Fort Detrick for three days' training in agent BG evaluation techniques. Necessary arrangements must be made with CmlC Training Command immediately.

c. CRDL agreed to fund for all travel and per diem for personnel from the Laboratories for this entire test period.

d. The test period will run approximately six weeks, depending on the final test design which will be prepared jointly by HUMRRO and this Agency (see paragraph 6h below).

e. Due to procurement lead time, I requested CRDL to order 3,000 oronasal masks.

f. Since the possibility exists that the UVINUL grenades from Dugway Proving Ground may be found to be unserviceable, I requested that Edgewood Arsenal make a survey to determine grenade can and squib availability and to develop a plan for making the grenades. This is for emergency use only.

g. The Biological Laboratories have ordered the BG and are getting the generators in working condition.

h. HUMRRO agreed to assist in developing the test design and requested that I visit them the first week in January to finalize the plan of test. This service will not involve any FRA funds.

i. DMO personnel were briefed on the actions to date and concurred in the draft test directive.

j. DMO personnel agreed that CMLCD 61-8 should be placed on civilian contract and further recommended that this Agency suspend all work on this project. A letter will be sent to FRA by DMO confirming this.

k. In regard to CMLCD 61-13, Captain Terlaje was given the information he requested.

7. Current and Future Plans:

a. The draft test directive will be finalized as soon as the participating agencies submit their respective parts. Target date for issuing this directive is 15 December 1961. It will be necessary to state in this directive that the number of tests will not be determined until about 5 January 1962.

b. The project officer plans to visit HUMRRO, Biol Labs, CRDL, CCB, and OCCmlO during the period 4-9 January 1962 to finalize the test design prior to issuing the plan of test on 1 February 1962.

c. Tactical scenarios, selection of primary and alternate test sites, specialized equipment required, photo coverage, and preparation of the estimate of logistical and administrative support requirements are all items that require immediate attention on the part of this Agency. Additional officer personnel to assist the project officer are needed as soon as possible.

d. Since no information on shipment of the UVINUL grenades has been received from DPG, a follow-up TWX will be sent requesting the status of this shipment.

e. Drafting of the plan of test will be started immediately.

GEORGE B. COE
Captain, CmlC

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-X 7 December 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days on TDY: 3 - 29 November to 2 December 1961.

2. Place of visit: Army Chemical Center, Maryland.

3. Person performing travel: John H. Gardner.

4. Purpose of visit:

a. To obtain information from Mr. Junkin, MATCOM, and Dr. Milly, ORG.

b. To attend conference on proposed test series.

5. Persons contacted:

a. Mr. William Junkin, MATCOM.

b. Dr. George H. Milly
Lt Col William Stone
Mr. Scott Thayer
(all of ORG)

c. Conferees at test series meeting.

6. Accomplishments:

a. Mr. William Junkin was reached by telephone. He reported that:

(1) The reconciliation of comments on CMLCD 61-12 and 61-13 was in the mail.

(2) Changes for guidance in FRA use of the Picatinny Arsenal stockpile-to-target sequence are on the way.

(3) Information requested with regard to CMLCD 62-7 must be obtained in part from ENCOM and will be sent to FRA by 15 December 1961.

b. Lt Col Stone discussed the CW-BW Technical Reference Handbook which ORG will soon publish. He was concerned about suggestions which had

reached him that this work might duplicate a project underway by FRA. He was assured that FRA has no similar project, and told that the confusion may have arisen from the Doctrinal Source Book formally in the FRA program until its cancellation some time ago.

c. A report on the conference on the proposed test series will be sent to FRA shortly. Pending receipt of this report, a separate memorandum for record is being prepared.

John H. Gardner

JOHN H. GARDNER
Scientific Advisor

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

FORT McCLELLAN, ALABAMA

CMLFR-R 12 Dec 61

MEMORANDUM FOR RECORD

SUBJECT: TDY Report, Capt Nord to Washington and ACC, Study CMLCD 61-1

1. Preliminary coordination of CMLCD 61-1, "Organization for Radiological Survey," was accomplished in Washington, D. C., on 4, 5 and 6 December. Captain Turner, Assistant Nuclear Effects Coordinator, and Majors Sugrue and Callanan of Combat Development Branch were consulted. Minor detailed comments were made and will be incorporated in the initial draft. The following administrative instructions were issued by Major Callanan:

a. Thirteen copies are to be sent to Signal Corps for coordination.

b. One copy should go to the Aviation Board for coordination because of the concepts involved.

c. One copy should be sent to the USA Combat Surveillance Agency, 1124 North Highland Street, Arlington, Virginia.

d. The informal session held among Majors Sugrue and Callanan and Captains Turner and Nord constitutes formal coordination review by Combat Development Branch and the DMO Assistant for Nuclear Effects Coordination. Thus the Chief's Office should not be included on coordination of the initial draft.

2. On 6, 7, and 8 December, coordination was accomplished with the Chemical Corps Board and the Nuclear Defense Laboratory at ACC.

a. Mr. Sawyer of the Board had only minor comments.

b. Captain William Powell, NDL, had served in a CBRC in Alaska and had been on survey missions at actual test shots. He had several minor comments and suggestions.

3. There were a number of sidelights to the trip which I considered very worthwhile:

a. Both the study and related radiological subjects were discussed informally with Colonel Merrill, Office of DMO.

b. Captain Turner, Office of DMO, and I visited a new pulse-reactor facility of the Diamond Ordnance Fuze Lab. The visit was in response to an invitation from Colonel Brill, NDL, whose automated sample counting trailer was at the site mapping neutron dose rates. The reactor is of the swimming pool type and will be used to furnish high neutron fluxes of short duration for equipment testing.

c. Captain Conway of NDL gave me a guided tour of the laboratory at ACC. Highlights observed included work on chemical dosimetry employing change of solution conductivity and colorimetric reactions. The new Cockroft-Walton accelerator is completed and has made short runs. Neutrons are generated by accelerating deuterons onto a tritium target (tritium absorbed in a metal disk) in order to produce a fusion reaction. The accelerator and target are surrounded by a thick concrete wall, but a remote controlled TV camera allows the operator to observe the target.

d. Mr. Sawyer of the Chemical Corps Board briefed me on their current projects and introduced me to both civilian and military members of the staff.

Alan A. Nord
ALAN A. NORD
Captain, CmlC

Chief, RW Division

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 8 January 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Person performing travel: Lt Col D. A. Brigden, Chemical Division.

2. Number of days TDY: 4 (10-13 December 1961).

3. Places of visit: a. Combat Developments Division, Office of the Chief Chemical Officer, Washington, D. C.

b. CRDL, Army Chemical Center, Maryland.

4. Personnel contacted:

a. Lt Col L. J. Stefani, Chief, CD Div, OCCmlO.
b. Maj J. A. Callanan, Concept Dev Br.
c. Mr. S. Waxman, Concept Dev Br.
d. Maj L. O. Elsaesser, Org & Equip Br.
e. Maj K. L. Stahl, Evaluation Section.
f. Mr. David Schneck, Mun Dev Div, CRDL.

5. Purpose of visit: Reference letter CMLMO-CD, OCCmlO, 30 November 1961, subject: "CBR Support for Army Aviation (C6519)."

6. Discussion: a. The task required by referenced letter, being unclear, was discussed with Lt Col Stefani during his visit to Fort McClellan for the Chemical Officers Conference. Since he was not certain either, as to what was wanted, he suggested that the action officer visit OCCmlO to resolve the problem and to visit CRDL to obtain data on the E39R1 Spray Tank and the E37 Universal Tank.

b. Discussion with various personnel at OCCmlO led to agreement on required action which was for FRA to prepare proposed MC's for interim items to provide a smoke, flame, and chemical delivery capability for light aircraft, based on the demonstrated capabilities of the E39R1 and E37 tanks.

c. Mr. Dave Schneck, Munitions Development Division, CRDL, briefed the action officer on the designs and capabilities of the E37 and E39R1. A tentative draft of MC's was prepared and informally coordinated by the action officer while at CRDL.

DOUGLAS A. BRIGDEN
Lt Col, CmlC
Chemical Division

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-B 18 December 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is made:

1. Number of days on TDY: 4 (10-13 December 1961).

2. Place of visit: Office of the Chief Chemical Officer and the Armed Services Technical Agency, Washington, D. C.

3. Person performing travel: 1st Lt William F. Filipkowski, Jr., U. S. Army CmlC Field Requirements Agency, Biological Division.

4. Purpose of visit: To represent U. S. Army CmlC Field Requirements Agency as project officer for the development of Chemical Corps Technical Information and Evaluation Program.

5. Persons contacted: See Inclosure 1.

6. Report:

a. The agenda for the meeting is shown as Inclosure 2.

b. During the first day the project officer was oriented on the tentative CRD & CmlC Programs concerning the retrieval of technical information. In addition, a visit was made to ASTIA Hqs in Arlington, Virginia, where project officer was briefed on and given a tour of ASTIA.

c. On the second day of the conference the draft copy of R&D Command Staff Study, "Committee Report on a CmlC Technical Information & Evaluation Systems" (Inclosure 3), was discussed in detail. At the conclusion of the discussion of this staff study, comments and/or concurrences were requested from the project officers present. The staff study was found acceptable except that no decision was made as to recommendations for the establishment of a Technical Information Center (TIC) at CCIA.

d. Each project officer was furnished a list containing approximately 12,000 descriptors which have been tentatively selected as a CmlC Thesaurus. Project officers were requested to review this list and make recommendations of additional descriptors pertinent to their agency's area of interest. These recommendations should be forwarded, as soon as practicable, to:

CMLFR-B 18 December 1961
SUBJECT: Report of TDY

Commanding General
USA CmlC R&D Command
ATTN: Mr. D. N. Vlannes
Advanced Planning Division
Washington 25, D. C.

e. Project officers were informed of ASTIA's current revision of their Thesaurus. A calendar for treatment of descriptor groups is attached as Inclosure 4. In the event no representation is contemplated, a negative reply should be forwarded.

f. It was decided by all project officers that another conference on TIES be held on 15 January 1962. The agenda for this meeting will include final revision of the descriptor list and each installation's needs for the establishment of a Technical Information Center. Project officers were advised that they have no restrictions concerning planning for personnel, facilities and funds in the development of the technical information centers.

7. Action required:

a. That the list of descriptors be reviewed as soon as practicable and a letter be forwarded to Advanced Planning Division, CmlC R&D Command, with the desired additions.

b. That a negative reply be sent to Advanced Planning Division, CmlC R&D Command concerning personnel from this installation available for assisting ASTIA's review of descriptor groups.

c. That USA CmlC Tng Com, in coordination with USA CmlC Field Requirements Agency and USA CmlC School, initiate a study to determine the over-all needs for the establishment of a CmlC Technical Information Center at this installation. Planning figures should be available by 15 January 1962 to present in the forthcoming conference at OCCmlO.

William F. Filipkowski

4 Incl
as

WILLIAM F. FILIPKOWSKI
1st Lt., CmlC
Biological Division

[redacted]

UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7) (U)

1 July - 30 September 1961

unclassified excerpt

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UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)
1 July - 30 September 1961

SECTION I - INTRODUCTION

1. (U) The U. S. Army Chemical Corps Field Requirements Agency during the period reported on (first quarter, Fiscal Year 1962) operated under provisions of Chemical Corps Regulation Nr 10-18, "U. S. Army Chemical Corps Field Requirements Agency," dated 28 February 1961. The Agency (hereinafter referred to as CCFRA) was stationed at Fort McClellan, Alabama; assigned as a Class II activity under the jurisdiction of the Chief Chemical Officer, with staff supervision and operational control by the Director for Military Operations; and attached for administrative and logistical support to the U. S. Army Chemical Corps Training Command. The Commanding Officer of CCFRA was Lt Col David C. Smith, Jr., 043394, Chemical Corps, until 3 August 1961; after that date, Colonel Jack E. Babcock, 021413, Chemical Corps. The Historian was Douglas E. Wilson (GS-12), Program Coordinating Officer and Documentation Officer. Where no entry or an incomplete entry is made in the sections that follow, it is to be understood that no change has occurred since the end of the last reporting period.

SECTION II - POLICY

2. (U) Mission and Responsibilities. No change.

3. (U) Programs and Projects. The work of CCFRA in carrying out its missions and responsibilities has continued as described in previous reports, with no change in the system of numbering projects outlined in the report for 1 January - 31 March 1961. Action on all numbered projects is summarized in Section III below, and separate progress reports on all current projects are attached in Annex A.

4. (U) Organization and Administration.

a. As mentioned in the preceding report, the organization approved for CCFRA on 8 May 1961 was not put into effect, owing to a change of commanding officers and the possibility of another such change in the near future. It was further decided to re-study the organizational needs of the Agency before requesting approval of a new organization and Table of Distribution. The Table of Distribution for FY 1962 (TD 03-1406-00) is based on the current organization, except that the Documentation Office, correctly shown on the organization chart in paragraph 6, Section I, is incorrectly titled "Technical Planning Office" in the heading to paragraph 03, Section II; and the mission in paragraph 3, Section I, is taken from CCR 10-18 dated 1 February 1956, which is obsolete, having been superseded by a new CCR 10-18 (with a new mission statement) dated 28 February 1961.

b. No changes were made in authorized officer, enlisted, or civilian spaces. At the end of the quarter, the Agency was overstrength one officer, but one was due for transfer in the next few days; it was understrength four enlisted men (all S&E) and two civilians (both professional). On 30 September 1961, the various divisions and offices were at the strengths shown:

	Authorized				Assigned			
	OFF	EM	Civ	Total	OFF	EM	Civ	Total
Office of the CO	4	0	2	6	3	0	2	5
Admin Office	1	2	2	5	1	2	2	5
Documentation Office	0	0	2	2	0	0	2	2
Chemical Division	6*	4	3	13	7	2	3	12
Biological Division	4*	3	3	10	6*	3	2	11
Radiological Division	6*	3	3	12	5*	1	2	8
TOTALS	21	12	15	48	22	8	13	43

*Includes one Infantry (Cml Div), one Armor (Biol Div), and one Artillery and one Medical Corps (Radl Div) authorized; no Infantry or Artillery officer assigned. All others Chemical Corps.

5. (U) Changes in Key Personnel.

a. Assigned.

(1) Colonel Jack E. Babcock was assigned to CCFRA as Commanding Officer, joining on 3 August 1961.

(2) Lt Col William G. MacFarlane was assigned to CCFRA, joining on 4 July 1961, and was detailed for duty as R&D Coordinator.

(3) Major Andrew J. Armstrong was assigned to CCFRA, joining on 4 July 1961, and was detailed for duty as Nuclear Effects Engineer, Radiological Division.

(4) Capt Alan A. Nord was assigned to CCFRA, joining on 2 September 1961, and was detailed for duty as Nuclear Effects Engineer, Radiological Division.

b. Departed.

(1) Lt Col Joseph C. Hiett, Chief, Biological Division, departed 29 September 1961 for assignment to U. S. Army CmlC Biological Laboratories, Fort Detrick, Maryland.

(2) Major Bliss A. Price, Special Assistant to the Commanding Officer (formerly Executive Officer), departed 8 August 1961 for assignment to U. S. Army Quartermaster Training Command, Fort Lee, Virginia.

(3) Capt Byron S. Easton, Artillery Staff Officer, Radiological Division, departed 11 September 1961 for assignment to III U. S. Army Corps, Fort Hood, Texas.

c. Changes in Duty.

(1) Lt Col David C. Smith, Commanding Officer, became Deputy Commander 3 August 1961 on the assignment of Colonel Babcock (see para 5a (1) above) as Commanding Officer.

(2) Lt Col Woodrow W. Reagan, Deputy Commander, was detailed for duty as Research and Development Coordinator, effective 3 August 1961. He was relieved from this duty and detailed as Chief, Biological Division, effective 29 September 1961, replacing Lt Col Hiett (see para 5b (1) above).

(3) Lt Col William G. MacFarlane, Research and Development Coordinator, was detailed for duty as Executive Officer effective 3 August 1961. He replaced Major Price, who was detailed for duty as Special Assistant to the Commanding Officer for the period 3-8 August 1961 pending his departure (see para 5b (2) above).

d. Changes in Command. The following officers successively assumed command, as announced by CCFRA General Orders on the dates indicated:

(1) Lt Col David C. Smith, GO Nr 13, 3 July 1961.

(2) Colonel Jack E. Babcock, GO Nr 14, 3 August 1961.

(3) Lt Col Woodrow W. Reagan, (in temporary absence of Col Babcock and Lt Col Smith), GO Nr 15, 28 August 1961.

(4) Colonel Babcock, GO Nr 16, 1 September 1961.

(5) Lt Col Smith (in the temporary absence of Colonel Babcock), GO Nr 17, 11 September 1961.

(6) Colonel Babcock, GO Nr 17, 18 September 1961.

e. Promotions.

(1) Major Douglas A. Brigden, Chemical Staff Officer, Chemical Division, was promoted to Lieutenant Colonel on 20 July 1961.

(2) Capt Henry T. Uhrig, Nuclear Medical Staff Officer, Radiological Division, was promoted to Major on 6 July 1961.

6. (U) Initiation or Cancellation of Major Programs or Projects. The operating program for FY 1962 was initiated during this quarter, including that part of the FY 1961 program which was carried over for completion in

this fiscal year. Individual projects initiated and terminated are shown in Section III below, and in the quarterly progress reports on projects in Annex A.

7. (U) Fiscal Information Bearing Upon Mission and Responsibilities.

a. The Annual Funding Program for CCFRA was set at $191,000, apportioned as follows:

Budget Program 2000:

Pay of Civilian Personnel	$120,000
Government Share of Retirement, etc.	10,000
Administrative Travel	9,000
Administrative Supplies & Equipment	2,000
Troop Tests: Travel	5,000
Troop Tests: Supplies & Equipment	43,000
TOTAL	$189,000

Budget Program 2100:

TDY, Schooling of Military Personnel	$2,000

Unfinanced Requirements:

TDY, Schooling of Military Personnel	$1,000

b. Obligational authority for the first quarter was for $45,000 in Program 2000 and $1,000 in Program 2100. Actual obligations were as follows:

Budget Program 2000:

Pay of Civilian Personnel	$25,954.00
Government Share of Retirement, etc.	1,875.74
Administrative Travel	2,773.20
Administrative Supplies & Equipment	637.21
Troop Tests	0.00
TOTAL	$31,240.15

Budget Program 2100:

TDY, Schooling of Military Personnel	$543.50
Total Obligations	$31,783.65

8. (U) Relationships with Other Agencies. No change was made in basic liaison relationships and procedures. Conferences and meetings at Fort McClellan of CCFRA personnel with members of other agencies are reported

final draft report on CMLCD 60-13, submitted in the preceding quarter, was returned by OCCmlO for revision and resubmitted.

b. An initial draft report on CMLCD 58-7 (Phase II) was submitted in lieu of a final draft report, since it was determined that a coordinated final report on this project was not required.

c. Project CMLCD 60-7 was cancelled, as its objective was fulfilled by submission of CMLFR 2-62.

d. Projects CMLCD 59-3 and 61-4, submitted in the preceding quarter, and CMLCD 58-4 (see par 12a above) were approved by OCCmlO; and distribution of the final reports on these projects has been made.

13. (U) Initial Drafts Completed.

a. Initial draft reports on Projects CMLCD 59-27, 61-7, and 61-12 were completed and sent out for comment and coordination.

b. For the initial draft of CMLCD 58-7 (Phase II), see par 12b above.

14. (U) Tripartite Conference Activities. No plans for CCFRA participation in the Sixteenth Tripartite Conference on Toxicological Warfare had been made by the end of this period.

15. (U) Combat Developments Program Planning.

a. A draft of the Combat Developments portion of the Chemical Corps Operating Program schedules for Fiscal Years 1962-1966 was forwarded to this Agency by OCCmlO under cover of letter, CMLMO-CD, 3 July 1961, subject: "Combat Developments Program (U)." It included 37 study projects and 4 test projects to be accomplished by CCFRA; of these, 15 current study projects (already initiated) were to be completed in FY 1962, and 8 new study projects and 3 test projects were to be initiated in FY 1962, 5 of these to be completed in the same year.

b. Analysis of this program in relation to the Agency's manpower resources led to the conclusion that the FY 1962 program should be reduced. It was also considered that certain projects scheduled for later years should be done sooner than certain others scheduled for FY 1962. Accordingly, recommendations to this effect was made to OCCmlO, and specific changes in the schedule were approved. The program was changed to include 14 old projects to be completed in FY 1962 (one was cancelled), and 6 new study projects and 2 test projects to be initiated in FY 1962. Of the new projects, 4 are to be completed in FY 1962 and 4 in FY 1963. On 22 September 1961, an additional project, to be completed in FY 1962, was added to the program.

c. Owing to delays caused by the revisions mentioned in par 15b above, the CCFRA Operating Program document had not been published by the end of the quarter.

SECTION IV - EVENTS

16. (U) Many of the events of most historical interest or importance during this period are included in the quarterly progress reports on projects, attached in Annex A, and the reports of TDY, attached in Annex B. CCFRA personnel participated in a large number of conferences and meetings at Fort McClellan with representatives of Headquarters, U. S. Army Chemical Corps Training Command and/or the U. S. Army Chemical Corps School; however, while all these discussions contributed in some degree to the accomplishment of CCFRA's mission, it is considered that the majority of them were not significant enough in themselves to be included in this report. The most important of these, and other events of particular interest not covered in the annexes (including all visits by representatives of agencies outside Fort McClellan), are briefly summarized in the following paragraphs.

17. (U) (10-28 July 1961) Major Armstrong attended Class Nr 1 of the Chemical Officer Refresher course at the U. S. Army Chemical Corps School.

18. (U) (12-13 July) Lt Col D. G. MacWilliams, OCCmlO, visited CCFRA and discussed problems related to current projects with Lt Cols Smith and Stephens, Captain Pederson, and Mr. Whitten.

19. (U) (14 July) Lt Col James Bowman and Mr. M. R. Nicastre, Office of the Inspector General, DCSLOG, visited CCFRA in connection with DCSLOG's annual general inspection of the Chemical Corps. They were briefed by Lt Col Smith on the mission and operations of the Agency; and they asked various questions on the current program and projects, as well as on the mobilization plan and organization.

20. (U) (29 July - 12 August) Major Armstrong attended the Disaster Recovery Course at the U. S. Army Engineer School, Fort Belvoir, Virginia.

21. (U) (31 July - 25 October) Captain Roark attended the 5th Associate Chemical Officer Career Course at the U. S. Army Chemical Corps School.

22. (U) (1-4 August) Lt Cols Smith, Stephens, Munn, and Brigden, Dr. Restool, and Mr. Whitten participated in the Eighth Annual Chemical Instructors Conference at the Chemical Corps School. Details are included in the report for CMLIP-4 in Annex A.

23. (U) (2 August) Brig Gen (then Colonel) L. E. Fellenz, DMO, OCCmlO, accompanied by Lt Col L. J. Stefani of his office, visited CCFRA and conferred with Lt Cols Smith, Reagan, and Brigden on various matters connected with the Agency's current activities. Lt Col Smith also attended a separate conference with Colonel Fellenz, Colonels Parks and Webber, CmlC School, and Major Wellde, OCCmlO, concerning the arrangement for the division of the services of Major Uhrig, Nuclear Medical Officer, between the CmlC School and CCFRA.

24. (U) (2 August) Lt Col John Moran, Chief of the Scientific Information & Liaison Division, OCCmlO, visited CCFRA and conferred with Lt Cols Smith and MacFarlane and Mr. Wilson on the accelerated Chemical Corps Information program.

25. (U) (3 August) Lt Col Stefani, OCCmlO, returned for further discussions with Lt Cols Smith and Furches and Mr. Wilson on problems related to projects in the current combat developments program.

26. (U) (6 August) Colonel D. G. Grothaus, Deputy Chief Chemical Officer, visited CCFRA and was briefed by Colonel Babcock, Lt Cols Smith, Reagan, and MacFarlane, Dr. Gardner, and Mr. Wilson on the organization and functions of the Agency. He also visited the various divisions to become acquainted with the personnel and the current projects.

27. (U) (6-18 August) Captain Terlaje attended the Ordnance Guided Missile Orientation Course at the U. S. Ordnance Guided Missile School, Redstone Arsenal, Alabama.

28. (U) (21-22 August) Captain Walter E. Campbell, U. S. Army Electronics Proving Ground, Fort Huachuca, Arizona, and Mr. Ralph C. Marden, I. B. M. Corporation (at Fort Huachuca), visited CCFRA and conferred with Lt Col Brigden, Dr. Restool, and Lt Jennings on matters connected with Field Army emergency warning systems.

29. (U) (25-30 August) Lt Col Smith participated in the Third U. S. Army Championship Golf Tournament as a member of the Fort McClellan Team.

30. (U) (5 September) Colonel Grothaus, Deputy Chief Chemical Officer, visited CCFRA again and conferred with Colonel Babcock on Agency problems.

31. (U) (10-30 September) Mr. Whitten attended the Management Course at the U. S. Army Management School, Fort Belvoir, Virginia.

32. (U) (10-16 September) Major Uhrig attended the Army Medical Service Instructors Conference at Fort Sam Houston, Texas.

33. (U) (11-16 September) Colonel Babcock attended the CBR Weapons Orientation Course at Dugway Proving Ground, Utah.

34. (U) (13-15 September) Mr. Wilson attended the annual convention of the Armed Forces Chemical Association in Washington, D. C., as a representative of CCFRA and the Fort McClellan Chapter and a member of the Board of Directors.

35. (U) (20 September) Lt Col O. C. Davis, Combat Developments Division, HQ USCONARC, visited CCFRA and discussed matters concerning the current study project program with Colonel Babcock and other Agency personnel.

36. (U) (21-22 September) Colonel F. M. Arthur, CmlC Board, visited CCFRA to coordinate the draft chapter 11 of the "RODAC-70" paper which had been jointly prepared by the CmlC Board, the CmlC School, and CCFRA. On 22 September a conference was held at which Colonel Arthur met with representatives of CCFRA, the CmlC Training Command, the CmlC School, and the 100th Cml Group to go over the draft and proposed changes thereto. Agreement was reached on all points.

37. (U) (27 September) Lt Claffey was appointed to the U. S. Army Chemical Corps Training Command Officers' Supplemental Field Ration Mess Fund Council.

38. (U) (28 September) Brig Gen (then Colonel) Adam W. Meetze, newly appointed DMO, OCCmlO, visited CCFRA and discussed matters concerning the Agency's activities with Colonel Babcock and other Agency personnel.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)

1 July 1961 - 30 September 1961

unclassified excerpt

ANNEX A

INITIAL PROJECT REPORTS

AND

QUARTERLY PROGRESS REPORTS

EA-SRD-932(71)

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 58-4

TITLE OF PROJECT: Chemical Field Decontamination Requirements (U)

PROJECT OFFICER: Capt Coe

OBJECTIVE: The objectives of this study are to determine the CW field decontamination requirements consistent with broad operational and logistical concepts and capabilities and to develop techniques and material and organizational requirements essential to continued operations under conditions of CW contamination.

INITIATION DATE: 31 July 1958

ESTIMATED DATE OF COMPLETION: This project has been completed.

STATUS: A revised final draft of study was forwarded to OCCmlO on 31 July 1961. Study was approved by Chief Chemical Officer on 25 Sept 1961. Six copies of the study are being prepared by FRA for submission by Chief Chemical Officer to U. S. Continental Army Command. Recommended distribution list was approved less those copies scheduled for operating forces which requires prior approval by U. S. Continental Army Command.

MANHOURS EXPENDED THIS QUARTER: 269

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLCD 58-7, Phase II

TITLE OF PROJECT: Requirements for Chemical Corps Units in the Army in the Field (U)

PROJECT OFFICER: Lt Col Munn

OBJECTIVE: To determine the Chemical Corps units required to support the Army in the field in the current and mid-range time frame.

INITIATION DATE: 29 Jan 1960

ESTIMATED DATE OF COMPLETION: Completed (unless OCCmlO directs otherwise).

STATUS: It was determined that the draft study, although based primarily on the CLDO concept of administrative support, would be of value to OCCmlO and should, therefore, be completed and forwarded. It was decided that no other distribution would be made unless subsequently directed by OCCmlO. The project officer completed the study during the quarter, and it was reviewed by the Agency's review board on 11 September 1961. A high priority action assigned to the project officer delayed for two weeks his integrating the comments of the review board into the study. The draft study will be forwarded to OCCmlO in four (4) typewritten copies on 2 Oct 61.

MANHOURS EXPENDED DURING QUARTER: 317

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLCD 59-5

TITLE OF PROJECT: The Tactical Use of V-Agents

PROJECT OFFICER: Dr. Gardner

OBJECTIVE: a. To develop tactics and techniques for the employment of VX with standard munitions and munitions under development to be used as a basis for the preparation of doctrinal literature.

b. To develop guidance for further research and development concerning applications of other potential agent-munition combinations which could be obtained by 1965.

INITIATION DATE: 21 July 1959

ESTIMATED COMPLETION DATE: 31 August 1961 (forwarded 11 Sep 61).

STATUS: Target analysis of type targets for attack using VX weapons has been accomplished. Data received from USACRBL on pick-up and persistence of VX have been analyzed to evaluate the potential use of this agent in barrier plans as well as to estimate friendly troop safety factors in exploitation of a VX attack on the enemy. Also, the relative vulnerability of troops as affected by variations in clothing has been investigated, including U.S., U.K., U.S.S.R., and C.C.F. forces.

The Final Draft was submitted to OCCmlO and USA CmlC Board in August 1961, and was coordinated by the project officer in conference with both agencies.

The Final Report was submitted to OCCmlO on 11 September 1961 for approval.

The project is 100% completed, provided no further changes are required by OCCmlO.

MANHOURS EXPENDED DURING QUARTER: 641

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 1

TITLE OF PROJECT: Application of Automatic Data Processing System(s) (ADPS) to Chemical Corps Field Activities; Chemical Supply System Analysis.

PROJECT OFFICER: Lt Phillips

OBJECTIVE: To determine and validate by processing systems analysis, the application of Automatic Data Processing to Chemical supply procedures in the Field Army.

INITIATION DATE: 1 December 1960

ESTIMATED DATE OF COMPLETION: 28 September 1961

STATUS: The final draft of this report was sent to OCCmlO for approval on 28 Sept 1961. Comments were received on the initial draft from: Combat Developments Division, OCCmlO; ADP Department, USAEPG; Headquarters, Seventh US Army; US Army CmlC MATCOM; and US Army CmlC Training Command. Major comments on the initial draft, the action taken, and a recommended distribution list were forwarded to OCCmlO with the final draft.

MANHOURS EXPENDED DURING QUARTER: 100

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 3A

TITLE OF PROJECT: Fallout Prediction Systems Analysis of Application of Automatic Data Processing System(s) (ADPS) to Chemical Corps Field Activities

PROJECT OFFICER: Capt J. E. Buckner

OBJECTIVE: To determine and validate by means of systems analysis the application of automatic data processing to the prediction of radiological fallout within the field army.

INITIATION DATE: 1 December 1960, present project officer assumed responsibility for project on 23 June 1961.

ESTIMATED DATE OF COMPLETION: 31 March 1962

STATUS: A major problem has been the improvement of the present manual system of fallout prediction. Analysis of the problem reveals that the present manual system is tailored to organizational and communications concepts and will be easily adapted to ADPS.

During this quarter a proposed ADPS system has been developed. Project officer is scheduled to attend a Systems Analysis course at Ordnance Weapons Command 23 October - 4 November 1961. It is estimated that a draft will be completed to be taken to school for unofficial comparison.

At present initial draft is 75% complete, initial draft due 1 December 1961.

MANHOURS EXPENDED DURING QUARTER: 470

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 3B

TITLE OF PROJECT: Contamination Charting Systems Analysis of Application of Automatic Data Processing System(s) (ADPS) to Chemical Corps Field Activities

PROJECT OFFICER: Capt J. E. Buckner

OBJECTIVE: To determine and validate, by means of systems analysis, the application of automatic data processing to the area of radiological contamination charting within the field Army.

INITIATION DATE: 1 December 1960; project officer assumed responsibility for project on 23 June 1961.

ESTIMATED DATE OF COMPLETION: 30 September 1962

STATUS: Literature research has been continued; however, major effort has been placed on CMLCD 59-16, Phase II, Part 3A. Project officer is scheduled to attend a Systems Analysis Course at the Ordnance Weapons Command 23 October - 4 November 1961. This project is about 1% completed.

MANHOURS EXPENDED DURING QUARTER: 7

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLCD 59-16, Phase II, Part 4

TITLE OF PROJECT: "Systems Analysis of the Employment of Toxic C&B Munitions" of Application of Automatic Data Processing System(s)(ADPS) to Chemical Corps Field Activities

PROJECT OFFICER: 1st Lt J. R. Phillips

OBJECTIVE: To determine and validate the application of automatic data processing to target analysis for the employment of toxic C&B munitions in the Field Army.

INITIATION DATE: 1 December 1960

ESTIMATED DATE OF COMPLETION: 1st Quarter FY 1963

STATUS: This report will be a detailed systems analysis of target analysis procedures used in the employment of toxic C&B munitions, to include the present system, a prepared improved manual system, and a proposed system using ADP procedures. The time frame considered will be 1961-1965. The present target analysis procedures are now being set forth based on TM 3-200. Work this past quarter has been confined to the present system. A major problem is determining the specific origin and form of the required input data. It is estimated that the initial draft will be issued for coordination on 30 April 1962. The project is about 25 per cent complete.

MAN-HOURS EXPENDED DURING QUARTER: 377

UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLCD 59-27

TITLE OF PROJECT: Requirements for Chemical Corps-Trained Officers by MOS, Army in the Field, 1961-1965 (U)

PROJECT OFFICER: Lt Col D. A. Brigden

OBJECTIVE: To develop predictions pertaining to the quantitative and qualitative requirements of the army in the field during 1961 to 1965 for officers with MOS's for which the Chemical Corps has training or training monitorship responsibility.

INITIATION DATE: 10 November 1959

ESTIMATED DATE OF COMPLETION: October 1961

STATUS: The initial draft was forwarded to the Chief, CD Division, OCCmlO; President, US Army CmlC Board; and CO, USA CmlC Training Command on 18 August 1961 for review and comment. During the project officer's visits to OCCmlO on 28 August and 21 September 1961, the further handling of the project report was discussed with representatives of CD and Personnel Divisions and with the Nuclear Effects Advisor. Because of certain actions initiated since the preparation of CMLCD 59-27, it was tentatively agreed that the initial draft report would be used only within the Chemical Corps as a source document for future actions. Comments received from the USA CmlC Training Command and CmlC Board will be forwarded by 10 October 1961 to OCCmlO with FRA discussion to be considered by the Chief, CD Division, OCCmlO, in preparing a letter for the Chief stating his position on the use of material contained in the report. It is expected that this action will terminate the project.

MAN-HOURS EXPENDED DURING QUARTER: 545

UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLCD 60-7

TITLE OF PROJECT: Supply Procedures for Chemical Corps Class V Materiel in Support of Army Operations (U)

PROJECT OFFICER: Capt G. B. Coe

OBJECTIVE: To develop concepts of supply procedures for the provision of chemical, biological, and radiological field materiel in support of future army operations, including special logistical, operational, and personnel problems involved.

INITIATION DATE: 20 December 1961

ESTIMATED DATE OF COMPLETION: 31 December 1961

STATUS: On 26 July 1961, this Agency recommended that CMLCD 60-7 be cancelled and deleted from the Chemical Corps Operating Program, FY 1962-1966, Target Year 1962. This recommendation resulted from an extensive investigation of the current and proposed logistical procedures for handling CBR Class V materiel. In addition, it was recommended that since the Ordnance Corps has logistical responsibility for the storage and issue of chemical-filled artillery shells, the Chemical Corps initiate the necessary correspondence to have the logistical responsibility for the M55 chemical-filled rocket in overseas theaters transferred from the Chemical Corps to the Ordnance Corps.

On 24 August 1961, by first indorsement, OCCmlO advised this Agency that referenced project was cancelled and deleted from the Chemical Corps Operating Program for FY 1962-1966, Target Year 1962. In regard to storage and issue of M55 rockets, OCCmlO requested that this Agency prepare and coordinate with U. S. Army Chemical Corps Training Command, a brief staff study to more fully justify the recommendation for logistical transfer of the chemical-filled rocket.

On 22 September 1961, after coordination with U. S. Army Chemical Corps Training Command, a staff study, CMLFR 2-62, "Assignment of Logistical Responsibility for M55 Rocket in an Overseas Theater (U)," was forwarded to OCCmlO.

MAN-HOURS EXPENDED DURING QUARTER: 65

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 61-1

TITLE OF PROJECT: "Organization for Radiological Survey 1965-1970 (U)"

PROJECT OFFICER: Capt Alan A. Nord

OBJECTIVE: To develop organizational and operational concepts, materiel requirements, and communications requirements for radiological survey, to include broad concepts for surveying enemy territory, by Army units in a theater of operations, during the 1965-1970 time frame.

INITIATION DATE: 29 September 1961

ESTIMATED DATE OF COMPLETION: 31 March 1962 (Phase I).

STATUS: 1. The project directive was issued by DNO, OCCmlO, on 29 September 1961. The directive divides the project among three phases:

a. Phase I will deal with radiological survey in the division based on ROAD-65 concepts.

b. Phase II will treat radiological survey in corps and field army based on ROBAC guidance is received.

c. Phase III will treat radiological survey in the communications zone. The proposed schedule for completion will be presented when firm guidance on reorganization of this zone is received.

2. By 1 September 1961, the previous project officer for Phase I had completed a rough draft of the proposed Annex A, "Operational Requirements for Radiological Survey, 1965," plus a portion of the proposed Annex B, "Division Organization for Radiological Survey, 1965."

3. Approximately 35% of the Phase I project has been completed.

4. On 5 September 1961, the study project was transferred to the current project officer.

5. It is estimated that the initial draft will be completed according to schedule by 31 December 1961.

MANHOURS EXPENDED DURING QUARTER: 254

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 61-4

TITLE OF PROJECT: "Radiological Monitoring of Personnel, Supplies, and Equipment in CONUS (U)"

PROJECT OFFICER: Capt Kennedy (Major Armstrong)

OBJECTIVE: To determine requirements for radiological monitoring of personnel, supplies, and equipment in CONUS and to determine the instruments, organizations, and staff procedures needed to provide a capability for such monitoring.

INITIATION DATE: 3 May 1960

ESTIMATED DATE OF COMPLETION: 1Q FY62

STATUS: The changes in the initial draft recommended by OCCmlO were incorporated by the new project officer. Delegation of authority for Civil Defense to DOD by the Executive Branch of the government, necessitated that cognizance be taken in the study of these new responsibilities. Changes were recommended by Rad Div and coordinated with OCCmlO. Informal approval of changes was obtained. The final draft was submitted to OCCmlO on 7 Sep 1961. This Agency was notified by OCCmlO that the final study was approved and submitted to CONARC, 26 Sep 1961, with approval by CONARC recommended.

MANHOURS EXPENDED DURING QUARTER: 187

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLCD 61-8

TITLE OF PROJECT: Organizational and Operational Concepts of a Chemical Attack Early Warning System, 1965-1970 (U)

PROJECT OFFICERS: Lt Col D. A. Brigden and 2d Lt Homer C. Jennings, Jr.

OBJECTIVE: To provide concepts of organization and operation for a chemical attack early warning system for the field army for the 1965 to 1970 period.

INITIATION DATE: 6 June 1961

ESTIMATED DATE OF COMPLETION: 4th Quarter FY 1962

STATUS: Information is being gathered to support preparation of the sections of this study concerning determination and evaluation of warning requirements and evaluation of the potential offered by the state-of-the-art. In this connection, the project officer accompanied representatives of the Electronic Proving Ground and IBM (contractor to EPG), who are conducting a study of all warning system requirements, on visits to the Bio Labs and CRDL where information and ideas concerning alarm equipment concepts were discussed in detail. The project officer also visited MELPAR, Inc. (contractors to CRDL on chemical agent alarms) to discuss their work in this area. The work that MELPAR, Inc., is doing under subtitle CAD (Criteria Analysis for Detection) will materially assist in determining and evaluating realistic field requirements for warning. The remainder of the MELPAR work concerning techniques of rapid detection may well serve as the principal background for the section concerning potential for satisfying the requirements. The project officer also participated in the BAl Master Planning Conference on 22 September 1961 at OCCmlO as a related background matter. The assistant project officer, who is preparing the evaluation of the state-of-the-art section, attended the presentations given at MELPAR, Inc., during the period 25-28 September 1961.

This project has not progressed sufficiently to support any tentative conclusions or system proposals. It is planned to have an initial draft distributed for comment by 30 March 1962. The project is about 5 per cent completed.

MAN-HOURS EXPENDED DURING QUARTER: 328

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 30 September 1961

NUMBER AND TITLE OF PROJECT: CMLCD 61-9, Organizational and Operational Concepts of a BW Early Warning System (U).

PROJECT OFFICER: Dr. Restool.

OBJECTIVE: To provide organizational, operational, and logistical concepts of a BW early warning system for integration into the operational early warning system of the Field Army.

INITIATION: 12 February 1961.

COMPLETION: 2Q62.

STATUS: The initial draft is ready for internal coordination. Per telephone on 3 October 1961, this agency has been given until 15 October to submit initial draft. No information is available on any change for the submission date of the final draft.

MANHOURS THIS QUARTER: 645.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 61-11

TITLE OF PROJECT: Concepts for Employment of Chemical Warheads for the LITTLE JOHN Rocket (U)

PROJECT OFFICER: Mr. Gaines (as of 19 Sep 61)

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of chemical warheads for the LITTLE JOHN Rocket in support of the army in the field during the mid-range time frame.

INITIATION DATE: 3 November 1960

ESTIMATED DATE OF COMPLETION: 31 Jan 62

STATUS: Since the report of 30 June 1961, those agencies responsible for submission of material for incorporation in the study have done so as follows:

FRA CmlC Tng Com: Proposed escort team TOE's and training requirements.

FRA CmlC R & D Com: Letter directing that target effectiveness be based on data in CmlC Bd Procedure, "Casualty Effectiveness of Toxic CW Munitions (U)."

All material required for completion of the study report has been received by FRA. The orgginal draft submitted by the project officer on 18 Sep 61 did not meet the requirements of the project directive; improper utilization of information submitted by participating agencies. Another project officer was assigned. It is estimated that the initial draft will be ready 15 Nov 61. Letter was sent to OCCmlO 27 Sep 61, asking for new dates as follows:

Initial Draft = 15 Nov 61
Final Draft = 31 Jan 62

MANHOURS EXPENDED DURING QUARTER: 396

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 30 September 1961

NUMBER AND TITLE OF PROJECT: CMLCD 61-12, Concepts for Employment of Biological Warheads for the SERGEANT Missile (U).

PROJECT OFFICER: Lt Filipkowski (Capt Hoark).

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of biological warheads for the SERGEANT Missile in support of the Army in the field during the mid-range time frame.

INITIATION: 28 November 1960.

COMPLETION: 2Q62.

STATUS: The initial draft has been completed and is presently being reviewed by this agency. Per telephone on 3 October, the agency has been given until 15 October to submit initial draft. In all probability this date will be met.

MANHOURS THIS QUARTER: 289.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 61-13

TITLE OF PROJECT: Concepts for Employment of Chemical Warheads for the SERGEANT Missile

PROJECT OFFICER: Capt Terlaje

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of chemical warheads for the SERGEANT Missile in support of the army in the field during the mid-range time frame.

INITIATION DATE: 28 Nov 1960

ESTIMATED DATE OF COMPLETION: 2Q FY62

STATUS: All material required for completion of the Initial Draft was reviewed and incorporated into the Initial Draft. Coordination within the US Army Chemical Corps Field Requirements Agency has been completed. Copies of the Initial Draft will be sent to:

1. MATCOM
2. RADCOM
3. ENCOM
4. TNG CMD
5. Combat Development Division of OCCmlO for review and comments by 3 Oct 61. This project is 95% complete.

MANHOURS EXPENDED DURING QUARTER: 477

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 30 September 1961

NUMBER AND TITLE OF PROJECT: 62-7, Operational and Logistical Concepts for Chemical and Biological Modules for Army Drone Systems (U).

PROJECT OFFICER: Dr. Restool.

OBJECTIVE: To develop operational, organizational, and logistical concepts for the employment of Army drones with a chemical and biological capability in support of the Army in the field during the mid-range time frame.

INITIATION: 7 February 1961.

COMPLETION: 2Q62.

STATUS: Reports of completed tasks required from supporting agencies on 15 July 1961 did not arrive. Letter of inquiry revealed that these reports will be sent to FRA as soon as possible or when the information becomes available to the supporting agency.

Logistical plans from MATCOM for the C and B modules of both drones have arrived but effects data are still lacking. In all reports received from contributing agencies, gaps in information still exist due to an absence of technical design data.

Progress on this project is entirely dependent upon receipt of information from these supporting agencies. The project officer has met with project officers from R & D and the report can still be completed on time, provided R & D continues work on both drones.

A slippage in development will be reflected in the project.

MANHOURS THIS QUARTER: 134.

Date Received: 6 October 1961

Completion Date: _____

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

INITIAL PROJECT REPORT

TITLE: U. S. Army Radiation Dosimetry System (U)

PROJECT NUMBER: CmlCD 62-8.

PROJECT OFFICER: Mr. H. P. Whitten

AUTHORITY: Letter, CMLMO-CD, OCCml0, 3 July 1961, subject: "Combat Developments Program (U)," and 1st Indorsement, CMLMO-CD 26 July 1961, to letter, CMLFR-D, USA CmlC FRA, 18 July 1961, same subject.

OBJECTIVE: To develop the requirements for radiation dosimetry and to develop a U. S. Army dosimetry system compatible with predicted U. S. Army organizations and procedures.

SCOPE: The scope of this study will encompass, but not necessarily be limited to:

1. Determination of the requirements for radiation dosimetry for the U. S. Army during the time period 1963-1970.

2. Determination of the adequacy of existing and proposed concepts for radiation dosimetry, and development of modifications or new concepts based on results of field tests and new army organizations.

3. Determination of the operational and organizational procedures to facilitate a complete and efficient dosimetry system for the U. S. Army.

4. Determination of the staff responsibilities necessary for the operation of a complete dosimetry system.

5. Proposals concerning training literature requirements, as evidenced by the conclusions of this study.

6. Proposals for further research and/or field testing to further substantiate the study conclusions.

ESTIMATED MANHOURS REQUIRED: 700.

RELATED PROJECTS:

a. Project Report, CmlCD 58-10, "Radiation Dosimetry (U)," U. S. Army Chemical Corps, January 1958, SECRET.

b. Project Report, CMLCD 59-12, "Impact of Command Dosage on Operations (U)," U. S. Army Chemical Corps, Feb 1960, SECRET.

BACKGROUND: This study is required in order to keep pace with the development of new army organizations. As army procedures and organizations change, the existing dosimetry system will need to be re-evaluated in order that radiation dosimetry can be used effectively in future armies. Further, CMLCD 59-12, "Impact of Command Dosage on Operations," was approved by OCCmlO and distributed in 3rd Quarter of FY 60. Radiation dosimetry concepts were partially tested in Exercise BRIGHT STAR in August 1960, and future tests are planned. Results of these tests will probably require some modification of existing dosimetry concepts and will aid in development of a complete U. S. Army Dosimetry System.

ESTIMATED COMPLETION DATES:

a. Project Directive Package (dispatched from USA CmlC FRA) - 15 May 62.

b. Initial Uncoordinated Draft - 30 Sep 62.

c. Final Coordinated Draft - 31 Dec 62.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 62-8

TITLE OF PROJECT: "U. S. Army Radiation Dosimetry System (U)"

PROJECT OFFICER: Mr. Henry F. Whitten

OBJECTIVE: To develop the requirements for radiation dosimetry and to develop a U. S. Army dosimetry system compatible with predicted U. S. Army organizations and procedures.

INITIATION DATE: 4Q FY62 (estimated)

ESTIMATED DATE OF COMPLETION: 2Q FY63 (estimated)

STATUS: Development phase of project will be initiated in 2Q FY62.

MANHOURS EXPENDED DURING QUARTER: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 62-10

TITLE OF PROJECT: Logistical Problems of CBR Protection (U)

PROJECT OFFICER: Mr. Gaines

OBJECTIVE: To determine the logistical problems incidental to the maintenance and supply of CBR protective materiel for the Army in the field during the mid-range time frame.

INITIATION DATE: 4Q FY62

ESTIMATED DATE OF COMPLETION: 2Q FY63

STATUS: No work was done on this project this quarter. Work will start on this project in 3Q 62. Project was originally programmed for FY63; however, following conference Col Babcock and Maj Gen Stubbs 30 Aug 61, it was moved forward to FY62.

MANHOURS EXPENDED DURING QUARTER: 0

Date Received _____

Completion Date _____

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

Initial Project Report

TITLE: "Recording Radiological Monitor and Automatic Radiation Alarm(U)"

PROJECT NUMBER: C.RCD 62-14

PROJECT OFFICER: Major A. J. Armstrong

AUTHORITY: "Proposed Combat Development Projects (U)", dated 1 Feb 1961, Control No. 8473

OBJECTIVE: To develop concepts and organizational requirements for a recording radiation monitor (0-500 r/hr) for radiation detection at fixed and semi-fixed army installations, and to determine the requirements for and distribution of a small, inexpensive automatic radiation alarm.

SCOPE: The scope of this study will encompass but not necessarily be limited to:

1. Determination of the requirements for a recording radiation monitor and an automatic radiation alarm at various echelons in the field army.

2. Determination of the types of instruments appropriate for use, to include a study of available instruments and instruments under development.

3. Determination of operational and organizational use of the recording radiation monitor and automatic radiation alarms, to include a sample SOP, if applicable.

4. Determination of a basis of issue for the subject instruments.

5. Proposals concerning training literature requirements, as evidenced by the conclusions of this study.

6. Proposals for further research and/or field testing to further substantiate the study conclusions.

MAN-HOURS REQUIRED: 700

RELATED PROJECTS: C RCD 61-4

[illegible]: The necessity for wide dispersion of units and/or installations in a nuclear conflict demands that these units and/or installations be prepared to operate for various times more or less independently. The imperfectness of our current fallout prediction system and the possibility of communications failure dictates that all echelons of the army have the best warning system possible for radiological attack.

[illegible] DATE NEED COULD BE MET: 30 June 1962

REMARKS: In a letter from CONARC dated 11 July 1961 to the major overseas commanders, it is noted that CONARC has concurred in a recommendation by the Armor Board that no further consideration be given to development of radiac alarms for the field army. However, CONARC recommended that the requirements for alarms in rear areas, COMZ, and CONUS be investigated.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 62-14

TITLE OF PROJECT: "Recording Radiological Monitor and Automatic Radiation Alarm"

PROJECT OFFICER: Major Armstrong

OBJECTIVE: To develop concepts and organizational requirements for a recording radiation monitor (0-500 r/hr) for radiation detection at fixed and semi-fixed army installations, and to determine the requirements for and distribution of a small, inexpensive automatic radiation alarm.

INITIATION DATE: 2d Q FY62

ESTIMATED DATE OF COMPLETION: June 1962

STATUS: This project is essentially in incubation. Time spent so far has been in reading basic documents on instrument theory and construction. A start has been made on the bibliography. An initial rough draft of the project directive has been written. It is anticipated that the draft project directive package will be finished in December 1961. Correspondence has been initiated with certain commercial firms and individuals who are knowledgeable in the field. To date no replies have been received. It is probable that a fact-gathering/liaison trip will have to be made in December of 1961. This trip should take no more than three days. The agencies to be visited are:

a. DASA
b. OCCmlO
c. NRL

Further trips to be made will be contingent upon high level decisions affecting procurement/maintenance of radiac instruments.

The project is estimated to be 10 per cent complete.

MANHOURS EXPENDED DURING QUARTER: 87

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U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 30 September 1961

NUMBER AND TITLE OF PROJECT: CMLCD 62-20, Requirements for Chemical and Biological Warheads for the PERSHING.

PROJECT OFFICER: Not yet assigned.

OBJECTIVE: To evaluate the potential of chemical and biological warheads for the PERSHING Missile.

INITIATION: 19 July 1961.

COMPLETION: 4Q62.

STATUS: Development phase work (literature search and project design) proceeded from 19 July 1961 to 21 August 1961. On 10 August 1961, a preliminary data assessment was made and a recommendation was submitted to the Commanding Officer, FRA that the study be transferred to the Biological Division. This recommendation was accepted on 21 August 1961. As reported on the original fact sheet from the Chemical Division, approximately 10 per cent of this project is complete.

MANHOURS THIS QUARTER: 148.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 30 September 1961

NUMBER AND TITLE OF PROJECT: CMLCD 62-22, Requirements for Chemical and Biological Warheads for the NIKE-HERCULES Missile (U).

PROJECT OFFICER: Lt Smith.

OBJECTIVE: To determine if a warhead requirement exists for chemical and biological warheads for the NIKE-HERCULES Missile.

INITIATION: 21 August 1961.

COMPLETION: 4Q62.

STATUS: Work on this project has just been initiated and is early in the D phase.

MANHOURS THIS QUARTER: 13.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 62T31

TITLE OF PROJECT: Field Experiment, Estimation of Casualty Effects Due to Surprise Chemical Attack, and Significance of Protective Mask Leakage.

PROJECT OFFICER: Capt G. B. Coe

OBJECTIVE: 1. To obtain information which will improve the prediction of probable casualty effects resulting from surprise attacks with chemical agents such as GB.

2. To determine the extent of leakage of the current army protective masks under operational conditions and to estimate the military significance of such leakage under plausible warfare conditions involving the use of chemical and biological antipersonnel agents.

INITIATION DATE: 4Q FY62

ESTIMATED DATE OF COMPLETION: 2Q FY63

STATUS: The development phase of this test will begin early in 2Q FY62. It is anticipated that the project officer will visit DRD of OCCmlO and the CmlC Board as part of the preliminary planning. CMLCD 62T32, "Field Experiment, Significance of Protective Mask Leakage," is being incorporated with 62T31.

MANHOURS EXPENDED DURING QUARTER: 25

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLCD 63T6, Phase I

TITLE OF PROJECT: Determination of After-Action Decontamination Requirements for Armored Fighting Vehicles and Ancillary Equipment, of 63T6 Phase II, Field Experiment, Armor Equipment in Chemical Attack.

PROJECT OFFICERS: Lt Claffey and Sp4 Harris

OBJECTIVE: To determine after-action requirements and to develop procedures concepts for decontamination of armored fighting vehicles and related equipment beyond that minimum already performed by the crew during the mission recently completed; to determine QMR's; and, if indicated, develop supporting organizational concepts for the current, mid, and long-range time frames.

INITIATION DATE: 4Q FY62

ESTIMATED DATE OF COMPLETION: 2Q FY63

STATUS: No progress was made on this study this quarter. This study, formerly CMLCD 62-19, is to be accomplished in FY 63 as a preliminary study to the actual test, CMLCD 63T6, Phase II. Work will begin on this study in 2Q FY62.

MANHOURS EXPENDED DURING QUARTER: 1

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLFR-1

TITLE OF PROJECT: Comments, Reviews, Conferences, and Contributions to Doctrine (U)

PROJECT OFFICERS: Lt Col Hiett, Lt Col Stephens, and Lt Col Furches (as division chiefs).

OBJECTIVE: To insure that approved CBR doctrine and/or tentative concepts of CBR are made known to agencies within the DA by means of comments on publications, films, studies, etc., or by original contributions.

COMPLETION: Continuing project.

STATUS: 1. Reviewed and (where appropriate) made comments on the following reports, studies, drafts, and other documents:

a. Draft DA Field Manuals or revisions thereof: FM 3-1, "Chemical Service in the Field"; FM 3-( ), "Operational Aspects of Radiological Defense"; FM 21-41, "Soldiers Handbook for Nuclear, Biological, and Chemical Warfare" (revision).

b. Draft DA Technical Manuals: TM 3-350, "Improvised Chemical, Biological, and Radiological Protective Shelters" (change 1); TM 3-( ), "U. S. Army Fallout Prediction Methods."

c. Draft DA Training Circular: TC 3-( ), "Radiological Incidents and Radiological Contamination Control."

d. Draft DA Graphic Training Aid: GTA 3-2, "Things to Do under CBR Attack" (revision).

e. Draft DA Technical Bulletins: TB CML 83, "M2 Point Source Downwind Toxic Vapor Hazard Calculator"; TB CML 91, "M3 Line Source Downwind Toxic Vapor Hazard Calculator."

f. Draft DA Army Subject Schedules: ASubjScd 3-8, "Chemical Processing" (revision).

g. HQ USCONARC, "1961 Review of Objectives for Chapters 2-18, inclusive, of Combat Development Objectives Guide (CDOG)."

h. HQ USCONARC, letter, "Maintenance and Calibration Facilities for Radiac Equipment, Field Army."

i. Office of Special Weapons Development, Study Project OSWD 61-1 (1962 revision), "Army Requirements for Nuclear Weapons Effects Research (U)"; and Study Project OSWD 61-3, "Acceptable Levels of Vulnerability to Nuclear Weapons Effects for Selected Categories of Equipment Used by the Army (U)."

j. U. S. Army Combat Developments Experimentation Center, "Outline Plan of Experimentation, Evaluation of Battalion Operations."

k. U. S. Army Command & General Staff College, study on "Visualization of the Battlefield."

l. U. S. Army Quartermaster Board, "Qualitative Materiel Requirements for a Family of Multi-purpose Tents (Small, Medium, and Large)."

m. U. S. Army Aviation School, "Requirements for Remote Controlled Smoke Screens."

n. U. S. Army Logistics Management Center, "1961 Annual Bibliography of Logistics Studies and Related Documents."

o. U. S. Army Ordnance Tank-Automotive Command, "Application of Chemical, Biological, and Radiological Protective Equipment" (request for opinion on downgrading of document).

p. U. S. Army Special School, "Recommended Qualitative Materiel Requirements for Anti-Materiel Chemical Agent System"; "Recommended Qualitative Materiel Requirements for Dissemination Systems, Chemical Agent, Lethal and Incapacitating"; and "Recommended Qualitative Materiel Requirements for Personnel Tracking and Identification System, Ground and Air."

q. Office, Chief Chemical Officer, DA - letters and documents on the following subjects: Project AVN 4261, "Draft Military Characteristics for Army Aircraft Crewman's Protective Mask"; Project FA 7061,

"Draft Military Characteristics for the Logistical Missile Head Section, HONEST JOHN"; "Military Characteristics for VX Warhead for Improved HONEST JOHN Rocket (U)";"Proposal for the Utilization of a Modified OQ-19B Aerial Drone as a Biological Warfare Delivery Vehicle (U)"; "Project WINSTON (short title XYA 9455 (U))"; "Requirement for On-the-Job Training"; "First Draft of Master Plan for Completion of E41 Type CW-Agent Point Source Alarm (U)"; Study Project 58-1, "Logistical Support of the Battle Group in Northern Operations"; and "Concepts and Equipment for Tactical Communications."

r. U. S. Army Chemical Corps Board, draft Report on Test Project CMLCD 57T2, "Field Experiment of CW Munitions Against Hard Targets (U)"; and draft Report on Study Project CMLCD 60-17, "Concepts of Use of Anti-Personnel BW Munitions in support of Army Operations (U)."

s. U. S. Army Chemical Corps Training Command, "Smoke Generator Battalion"; and "Recommended Communication System for Chemical Units."

t. U. S. Army Chemical Corps Research & Development Command, "Transmittal of Project WASP Documents"; and "Biological and Chemical Research and Development Plan, FY 1961-1965 (Draft)."

u. U. S. Army Chemical Research & Development Laboratories, "Proposed Specification for C-Store Shipping Container"; and "Development Plan for Chemical Warhead Section for the SERGEANT Missile (U)."

v. U. S. Army Chemical Corps Biological Laboratories, Draft Technical Paper Nr 30, "Selected Antipersonnel Munitions for Special BW Operations (U)."

w. U. S. Army Chemical Corps Proving Ground, Dugway Proving Ground, "Integrated Draft Plan of Test for AN/USD-2 (XAE-3) Low Endurance Multipurpose Drone"; draft of DPGTP 495, "Final Engineering Test of CBR Agent Sampling and Analyzing Kit, E34"; and draft of DPGTP 496, "Final Engineering Testing of the E20 LITTLE JOHN Warhead, GB (U)."

x. Blue Sky Suggestions, as follows (13 items): BSC 61-65, "Neutron Measurement (Dose)"; 61-66, "Radiation Shielding"; 61-71, "Laser Death Ray";

61-74, "Sketch of Proposed Method of Dispersing Riot Control Agent"; 61-75, "Development of Napalm Rockets"; 61-76, "Use of Tank 'Snake' for Napalm Dispensing"; 61-77, "Anti-Foam Agent"; 61-85, "Safety Head Modification"; 61-97, "Counter-Guerilla Measures (U)"; 61-99, "Dry Chemical Hurricane Pulverizer-Classifier"; 61-108, "Flame Thrower Valve Modification"; 61-110, "P-Bomb"; and 61-114, "Detector Kit Modification."

2. In collaboration with the U. S. Army Chemical Corps Board and U. S. Army Chemical Corps School, prepared a draft of Chapter 11, "CBR Operations," for CDOG Project CGSC 61-8, "RODAC-70."

MAN-HOURS EXPENDED DURING QUARTER:

	1a	1b	1c	1d	1e	1f	Total
Cml Division	-	29	183	87	132	25	456
Biol Division	3	192	63	70	254	-	582
Radl Division	355	17	19	13	81	37	522
Office of the CO*	26	41	140	4	33	-	244
Documentation Off	17	7	6	5	34	4	73
TOTALS	401	286	411	179	534	66	1,877

(* Including R&D Coordinator)

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

Date: 30 September 1961

1. Number and title of project: CMLFR 5-61, "Maintenance of Radiac Equipment."

2. Project Officer: Captain Duane M. Pederson.

3. Objective: To develop a radiac equipment maintenance support plan suitable for adoption and implementation by the Chemical Corps.

4. Initiation date: 30 March 1961.

5. Completion date: 10 August 1961.

6. Status: a. This study was completed and dispatched to OCCmlO on 10 August 1961. The study is being used as a part of an overall study being prepared by OCCmlO.

   b. Percentage of completion: 100%.

7. Manhours used during this quarter: 196.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLFR 6-61

TITLE OF PROJECT: Classified (Short Title: "Clobber (U)")

PROJECT OFFICER: Capt Terlaje

OBJECTIVE: To examine the value of this weapon as a means of delivery and dissemination of CBR agents and determine if US Army Chemical Corps Research and Development Command should investigate the technical aspects of the weapons system.

INITIATION DATE: 17 April 1961

ESTIMATED DATE OF COMPLETION: September 1961

STATUS: The report in letter form was completed and submitted by FRA on 24 August 1961. It was determined that a letter report would be more applicable for this study.

MANHOURS EXPENDED DURING QUARTER: 202

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: CMLFR 2-62

TITLE OF PROJECT: Assignment of Logistical Responsibility For M55 Rocket in an Overseas Theater

PROJECT OFFICER: Capt Coe

OBJECTIVE: To fully justify the recommended transfer of the logistical responsibility for the M55 chemical-filled rocket in overseas theaters from the Chemical Corps to the Ordnance Corps.

INITIATION DATE: 24 August 1961

ESTIMATED DATE OF COMPLETION: 22 September 1961

STATUS: On 26 July 1961 this Agency recommended that CMLCB 60-7 be cancelled and deleted from the CmlC Operating Program, FY 1962-1966, Target Year 1962. This recommendation resulted from an extensive investigation of the current and proposed logistical procedures for handling CBR Class V materiel. In addition, it was recommended that since the Ordnance Corps has logistical responsibility for the storage and issue of chemical-filled artillery shells, the CmlC initiate the necessary correspondence to have the logistical responsibility for the M55 chemical-filled Rocket in overseas theaters transferred from the CmlC to the OrdC.

On 24 August 1961 by 1st Indorsement, OCCmlO advised this Agency that reference project was cancelled and deleted from the CmlC Operating Program for FY 1962-1966, Target Year 1962. In regard to storage and issue of M55 Rockets, OCCmlO requested that this Agency prepare and coordinate with U. S. Army CmlC Trng Command, a brief staff study to more fully justify the recommendation for logistical transfer of the chemical-filled rocket.

On 22 September, after coordination with U. S. Army CmlC Training Command, this study was forwarded to OCCmlO.

MANHOURS EXPENDED DURING QUARTER: 16

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLIP-1

TITLE OF PROJECT: Planning and Scheduling of Combat Developments Projects (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To program and schedule the development of combat development study and test projects by this Agency, in conformance with guidance and directives from OCCmlO, and to develop requirements for personnel, funds, and other resources to carry out the Agency's program.

COMPLETION: Continuing project.

STATUS: 1. A draft of the Combat Developments portion of the Chemical Corps Operating Program for Fiscal Years 1962-1966 was forwarded to CCFRA under cover of letter, CMLMO-CD, 3 July 1961, subject: "Combat Developments Program (U)." It included the following to be accomplished by CCFRA:

	Studies	Tests	TOTAL
Total projects, 1962-66	37	4	41
Previously initiated	15	0	15
To be initiated & completed in FY 62	5	0	5
To be initiated in FY 62 & completed in FY 63	3	3	6
Total in 1962 program	23	3	26

2. Analysis of the program in relation to CCFRA's manpower resources led to the conclusion that the FY 1962 program should be reduced. After conferences with Lt Col Stefani, Chief of Combat Developments Division, OCCmlO, at Fort McClellan on 2-3 August 1961 and at OCCmlO on 29-30 August 1961, recommendations were made for cancellation of certain projects and rescheduling of others, with the result that CCFRA was to accomplish the following:

	Studies	Tests	TOTAL
Total projects, 1962-66	35	3	38
Previously initiated	14	0	14
To be initiated & completed in FY 62	4	0	4
To be initiated in FY 62 & completed in FY 63	3	2	5
Total in 1962 program	21	2	23

3. One of the study projects included in the foregoing table was added to the program by letter dated 22 September 1961. It is to be completed in FY 62.

4. Owing to delays caused by the revisions mentioned in paragraph 2 above, the CCFRA Operating Program Document had not been published by the end of the quarter.

5. The Agency was allotted $189,000 for FY 62 in Program 2000 and $2,000 in Program 2100, with an unfinanced requirement of $1,000 in Program 2100.

MAN-HOURS EXPENDED DURING QUARTER: 153

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLIP-2

TITLE OF PROJECT: Analysis and Abstracting of Reports, Studies, and Publications (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To review, evaluate, and (where indicated) abstract documents circulated within the Agency with a view toward their possible use in the development of doctrinal, operational, organizational, logistical, or materiel concepts.

COMPLETION: Continuing project.

STATUS: 1. The following abstracts were prepared and processed during the past quarter:

	Prepared in 4th Qtr	Processed in 4th Qtr	Backlog Unprocessed
Cml Division	53	51	2
Biol Division	19	16	3
Radl Division	26	21	5
Documentation Off	12	12	0
TOTAL	110	100	10

2. The abstracts submitted to the Documentation Office were checked for accuracy and format, typed, circulated for information, and filed. At the end of the quarter, about 16,475 abstract cards were on file, representing 4,707 abstracts on individual documents.

MAN-HOURS EXPENDED DURING QUARTER:

Cml Division	- 185
Biol Division	- 1,175
Radl Division	- 533
Documentation Off	-191
TOTAL	2,084

UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLIP-3

TITLE OF PROJECT: Army Doctrinal Guidance Statements (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To assist the CG, USCONARC, in generating new or changed doctrine.

COMPLETION: Continuing project.

STATUS: A committee consisting of the Deputy Commander, the Scientific Advisor, the Program Coordinating Officer, and the chiefs of divisions was appointed for the purpose of reviewing completed projects and formulating doctrinal guidance statements for inclusion in FM 100-1. The committee did not meet in this quarter.

MAN-HOURS EXPENDED THIS QUARTER: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE 30 September 1961

NUMBER OF PROJECT: C.R.I.P 4

TITLE OF PROJECT: Instructional Presentations and Assistance to CmlC School

PROJECT OFFICER: N/A

OBJECTIVE: To properly prepare and present instructional presentations and to give assistance to the CmlC School.

COMPLETION: Continuing Project.

STATUS: 1. Participated in Eighth Chemical Instructors Conference at Fort McClellan on 1-4 August 1961. Lt Col David C. Smith, Lt Col Richard A. Munn, Lt Col Louis B. Stephens, and Lt Col Douglas A. Brigden gave a discussion of the purpose of combat development in OCCmlO and Da to include several projects in CBR operations. The scope, conclusions, and some recommendations were given on individual projects discussed. Lt Col Smith, Lt Col Brigden, Dr. D. F. Restool, and Mr. H. P. Whitten acted as project consultants, being designated to assist in arranging for discussion of individual problems, getting answers to questions, scheduling conferences, obtaining materials, etc. At least five members of FRA attended each session of the Conference.

2. Participated in informal conference at Fort McClellan concerning U. S. Army Chemical Corps Field Requirements Agency support for CPX, which is taught as part of the curriculum of the Career Officers' Course at the U. S. Army Chemical Corps School. Major Armstrong, of this Agency, will be employed either as Fire Support Controller or Battle Group Controller. The exercise will be held 9-14 October 1961.

3. By an informal agreement between the U. S. Army Chemical Corps Field Requirements Agency and the U. S. Army Chemical Corps School, Major Uhrig devotes 75% of his efforts in assisting the School. During this quarter the assistance consisted of:

a. Preparation and presentation of lectures.
b. Assistance in conducting the Escape and Evasion Course.
c. Assistance as a medical consultant at several informal conferences.
d. Participated in the Army Medical Service Instructor's Conference on 10-16 September 1961 at Ft Sam Houston, Tex.

MANHOURS EXPENDED DURING QUARTER: 224

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLIP-5

TITLE OF PROJECT: Program Review and Analysis (U)

PROJECT OFFICER: Mr. Wilson

OBJECTIVE: To appraise the effectiveness of the Agency's accomplishments in relation to its program, by measuring progress toward scheduled objectives and determining economy and efficiency in the use of resources, and to recommend corrective action wherever it is required for improvement.

STATUS:

1. Review and Analysis presentation (oral) for the 4th Quarter, FY 1961, was made to the commanding officer, CCFRA, on 19 July 1961.

2. Special report to Director for Military Operations, OCCmlO, on status and progress of all CMLCD projects as of 30 June 1961, with estimated completion dates of all those not yet completed, was submitted on 24 July 1961. OCCmlO requested that this information be resubmitted in the form of separate progress reports on all projects, according to the format established in their letter of 3 July 1961, although that letter had originally applied only to projects in the FY 1962 program. This request was complied with, the revised reports being submitted 18 August 1961.

3. Historical Report for the 4th Quarter, FY 1961, was submitted to the CmlC Historical Office 9 August 1961.

MAN-HOURS EXPENDED THIS QUARTER: 417

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLIP-7

TITLE OF PROJECT: Means of Delivery and Dissemination of Chemical and Biological Agents (U)

PROJECT OFFICER: Dr. Gardner

OBJECTIVE: To develop concepts for means of delivery and dissemination of chemical and biological agents against suitable targets.

COMPLETION: Continuing project.

STATUS: No action this quarter. Desired concepts will be developed as the opportunity occurs.

MAN-HOURS EXPENDED THIS QUARTER: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

DATE: 30 September 1961

NUMBER OF PROJECT: CMLIP-9.

TITLE OF PROJECT: Army Organization (U)

PROJECT OFFICER: Lt Colonel Munn

OBJECTIVE: To facilitate the accomplishment of the Agency's combat development study program by assembling, analyzing, and correlating the various plans, studies, and other documents specifically related to Army organization, and by providing up-to-date information on this subject to the operational elements of the Agency.

INITIATION: 1 April 1960.

COMPLETION: Continuing project.

STATUS: During the quarter, the restrictions on discussing the ROAD 65 divisions were lifted, and the USACGSC study was circulated within the Agency. A number of draft TOEs of the proposed units were received and filed with the Agency's TOE library. Lt Col Keown, Armor, CmlC School, presented a briefing to the Agency on the ROAD divisions on 27 September.

MANHOURS THIS QUARTER: 9.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

DATE: 30 September 1961

NUMBER OF PROJECT: CMLIP-10

TITLE OF PROJECT: Background Information for FRA Projects (U)

PROJECT OFFICER: Dr. Gardner

OBJECTIVE: To collect, organize, and catalog background information related to FRA studies in order to place these studies in their proper perspective.

COMPLETION: Continuing project.

STATUS: No action this quarter. The notebook will be revised when new projects are added to the program, and/or when new information is received on current projects.

MAN-HOURS EXPENDED THIS QUARTER: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)

1 July - 30 September 1961

ANNEX B

REPORTS OF TEMPORARY DUTY TRAVEL

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 27 July 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 5 (27 June - 1 July 1961).

2. Place of visit: a. Fort Rucker, Alabama
b. Fort Benning, Georgia

3. Person performing travel: Capt Byron S. Easton.

4. Purpose of visit: Research for project CMLCD 61-1, "Organization for Radiological Survey 1965-70 (U)."

5. Persons contacted:

a. Major Gower, Department of Combat Development, US Army Aviation School, Fort Rucker, Alabama.

b. Capt Lopes, Department of Combat Development, U. S. Army Aviation School, Fort Rucker, Alabama.

c. Colonel C. D. Sterner, Chief Combat Development Office, U. S. Army Infantry School, Fort Benning, Georgia.

d. Colonel G. H. Huppart, Deputy Chief Combat Development Office, US Army Infantry School, Fort Benning, Georgia.

e. Lt Col Cundiff, Combat Development Office, U. S. Army Infantry School, Fort Benning, Georgia.

f. Major [illegible]. Carpenter, Combat Development Office, U. S. Army Infantry School, Fort Benning, Georgia.

6. Discussion and Accomplishments:

a. Major Gower and Capt Lopes were contacted at the US Army Aviation School in an effort to determine the types and number of Army aircraft expected to be available to the various divisions during the time frame of the study. The following information was obtained:

(1) There will be approximately 102 Army aircraft in the ROAD divisions. The majority of these will be helicopters.

(2) It is expected that Army aircraft will have a 24-hour all-weather capability by 1965.

(3) No aircraft will be specifically designated for radiological survey. All aircraft will have the capability, with surveys being conducted on a mission type basis.

(4) The radiological survey instrument should require no special pilot training, and will have a "plug in" feature to permit the instrument to be mounted when required.

(5) The radiac-transponder package should be as light as possible, not to exceed 20 pounds if feasible.

(6) If absolute altitude and position fixing are requirements, these inputs can be obtained from instrumentation expected to be on-board navigational equipment for all Army aircraft by the time frame of interest.

(7) Staff relationship for aerial surveys will be as follows:

(a) Chemical Officer decides that an aerial radiological survey is needed to fulfill an operational requirement. He advises the G-3 of the requirement.

(b) The G-3 approves the request and notifies the Aviation Officer to schedule the mission. (A priority system may be utilized.)

(c) The Chemical Officer briefs the Aviation Officer on the details of the mission, such as area to be surveyed, suggested course legs, suspected radiological hazard, and latest time the survey information is required by the CBRE.

(d) The mission is flown and the survey information obtained.

(e) Survey information is transmitted to the CBRE for processing.

b. Major A. E. Carpenter was contacted at the U. S. Army Infantry School in an effort to determine infantry requirements for radiological survey information and their capability to support the ground survey requirement as stated in TC 101-1. The following information was obtained:

(1) In order to assure reliability of survey information, one member of the survey party is normally an NCO. This places a serious drain of key personnel when the company is required to participate in a radiological survey.

(2) Each survey part requires a vehicle and radio. This will cause a serious drain on critical equipment.

(3) The only radio channel available for transmission of survey data is the command channel. A radiological survey would swamp this channel for long periods of time. This is something the infantry can not tolerate.

(4) The information gained does not justify the tactical sacrifice required to obtain it.

(5) Only reserve units could possibly spare the men and equipment required for the survey.

(6) Ground survey has no capability in enemy held territory. This type information will most likely have the greatest tactical significance for the infantry.

c. After discussing the problem with Major Carpenter, the conclusions, shown above, were discussed with Lt Col Cundiff, Col Huppart, and Col Sterner. They agreed with this position. Col Huppart stated that additional requirements for infantry units must be maintained at the absolute minimum.

Byron S. Easton
BYRON S. EASTON
Capt, Artillery
Artillery Staff Officer
Radiological Division

Approved
David C. Smith
DAVID C. SMITH
Lt Col, CmlC
Commanding

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 17 July 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Number of days TDY: 6 (9-14 July 1961).

2. Places of visit: U. S. Army Chemical Corps Board, Army Chemical Center, Maryland, and Office of the Chief Chemical Officer, Washington, D. C.

3. Person performing travel: Capt George B. Coe, Chemical Division.

4. Purpose of visit: To coordinate CMLCD 58-4.

5. Persons contacted:

a. U. S. Army Chemical Corps Board:

Col D. D. Bode
Col G. E. Donald
Col M. A. Peerenboom
Col E. A. Lewis
Col F. M. Arthur
Dr. E. W. Hollingsworth
Lt Col L. E. Mott
Lt Col J. C. Hinchie
Maj W. L. Flanigan
Mr. E. H. Sawyer
Mr. P. T. Geckle

b. Directorate of Research, CRDL:

Dr. C. M. Herget

c. Directorate of Medical Research, CRDL:

Dr. V. M. Sim

d. Director for Military Operations:

Col L. E. Fellenz
Mr. S. Waxman
Capt J. A. Callanan

CMLFR-C 17 July 1961
SUBJECT: Report of TDY

6. Discussion:

a. On 10 July 1961, the undersigned briefed selected members of the Chemical Corps Board on project CMLCD 58-4. The purpose of this briefing was to present the conclusions and recommendations as contained in the revised report dated December 1960 with changes thereto, and to gain the Board's concurrence in the report. During these discussions it was not possible to resolve the major differences, and on 11 July, the Deputy President called a board meeting to resolve this problem. Upon termination of this meeting and with some modification of the report, the Deputy President of the Board concurred in the processing of the report to its conclusion. The necessity of personnel decontamination, even though the man has two layers of protective clothing on, was discussed with Dr. Sim and Dr. Herget on 12 July. Both concurred in the information as presented in the revised report.

b. On 13 and 14 July, the undersigned met with members of the Concept Development Branch, Combat Development Division, Office of the Chief Chemical Officer, for the purpose of presenting the revised draft of the report that had been coordinated with the Chemical Corps Board. It was also necessary to seek clarification of certain points contained in comments received from OCCmlO regarding the report. Upon completion of this meeting it was agreed that the Field Requirements Agency should process the report to completion and forward subject document to OCCmlO for final staffing and approval.

c. The advisability of continuing CMLCD 60-7, "Supply Procedures for Chemical Corps Class V Materiel in Support of Army Operations," was also discussed. I explained that FRA, after a rather extensive investigation, felt that this project should be cancelled due to the limited area of involvement. Captain Callanan and Mr. Waxman readily agreed and asked that FRA send a letter to OCCmlO requesting the project be cancelled.

7. Recommendations:

a. That CMLCD 58-4 be processed to completion.

b. That a letter be prepared and forwarded to OCCmlO stating the reasons and requesting that CMLCD 60-7 be cancelled.

GEORGE B. COE
Capt, CmlC

DAVID C. SMITH
Lt Col, CmlC
Commanding

US ARMY CHEMICAL CORPS MATERIEL REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 18 July 1961

MEMORANDUM FOR RECORD
SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days: 4 (11-14 July 61).

2. Place of visit: Pine Bluff Arsenal, Pine Bluff, Arkansas.

3. Persons Performing Travel: Dr. D. F. Restool
Major H. T. Uhrig
Lt W. F. Filipkowski, Jr.

4. Purpose of visit: Orientation on Pine Bluff operation. Tour of the post and detailed tour of the Biological Plant.

5. Personnel contacted: Colonel John Palmer, Post Commander.
Mr. Ackhorn, Production.
Mr. J. Maupin, Executive Officer.

6. Accomplishment on TDY: Received a comprehensive briefing of the organization and function of Pine Bluff Arsenal. Toured the post in general and the BW plant in particular.

H. T. UHRIG
Major, Medical Corps

W. F. FILIPKOWSKI
1st Lt, CmlC

D. F. RESTOOL
Biologist, B Div

DAVID C. SMITH
Lt Col, CmlC
Commanding

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-A 27 July 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY (U)

The following report of TDY is hereby made:

1. (U) Number of days on TDY: 3 (19-21 July 1961).

2. (U) Person performing travel: Maj Bliss A. Price, CmlC, 01305640.

3. (U) Specific purpose of visit: To attend meeting on the REGULUS I Weapon System, Army Chemical Center, Maryland.

4. (U) Personnel contacted: Mr. J. P. Sansonetti and Mr. John L. Kratzer, CRDL; Mr. A. Latsko, Mr. R. R. Palmer, and Mr. P. N. Ransdell, Chance-Vought Corp.; Mr. R. L. Ortynsky and Col F. M. Arthur, USA CmlC Board; Mr. Harley H. Hood, CmlC R&D Com; Mr. G. A. DeShazer, BWL; Comdr R. E. Scholl and Lt Comdr K. H. Robertson, Bureau of Weapons, Naval Dept; Mr. M. L. Hunt and Mr. D. C. Sloan, Naval Weapons Lab.

5. (U) Accomplishments of temporary duty travel: See attached agenda for information covered during the meeting.

6. (C) Discussion:

a. Mr. J. P. Sansonetti, CRDL, Army Chemical Center, Md., chaired the meeting.

b. Lt Comdr K. H. Robertson, Bureau of Weapons, Dept of the Navy, explained that the Navy was interested in establishing a BW and CW capability for the REGULUS I missile. The purpose of the meeting was to determine what procedure should be following in conducting a feasibility study for developing the CB capability.

c. Mr. R. R. Palmer, Chance-Vought Corp., described the REGULUS I system using a Chance-Vought brochure as the basis for his discussion. (See inclosure 2 for a summary of questions asked concerning REGULUS I.)

d. Mr. J. L. Kratzer, CRDL, then described the work which had been done on the CW warhead for the REGULUS II study. Mr. G. A. DeShazer, BWL, described the work which had been accomplished on the BW warhead for the REGULUS II missile.

MEMORANDUM FOR RECORD: 27 July 1961
SUBJECT: Report of TDY (U)

e. As a result of the above briefing by Mr. Kratzer and Mr. DeShazer, Navy personnel present stated that it would appear that the Navy would be interested in developing a C and B warhead. Mr. Sansonetti then outlined a proposed approach to the feasibility study as follows:

(1) Targets and effects desired.

(2) Warhead development.

(3) Effects obtainable with warheads developed under (2) above.

(4) Navy logistical procedures for handling the C and B warheads.

(5) Scheduling and money required to develop a capability.

f. Mr. Sansonetti further recommended that the Chance-Vought Corp. be assigned the responsibility for conducting the study. Various elements of the Chemical Corps and the Navy would assist in preparing the various phases stated above. It was determined that the tentative schedule for development would be as follows:

(1) Initiate study in FY 1962.

(2) Start development of warheads in FY 63, stockpile in FY 65.

7. (C) Conclusions and recommendations:

a. The above proposals were concurred in by the conferees; however, since there would be Navy funds involved and actions by agencies of the Director for Military Operations, OCCmlO, it was recommended that the conferees return to their agencies and take necessary action to obtain approval.

b. With regard to action by the Director for Military Operations, it was determined that Mr. Harley H. Hood of R&D Command would contact the DMO's office and inform them of the results of the meeting.

2 Incl
as

BLISS A. PRICE
Major, CmlC
Executive Officer

Approved
David C Smith
LtCol CmlC

Tentative Agenda - REGULUS I Meeting

20 July 1961

Room 202 1000 Hours

Time			
1000-1015	I.	Purpose of meeting and background relating to study requirement	Bu Weps
1015-1045	II.	Description of REGULUS I Weapon System Discussion	Chance Vought
1100-1145	III.	Review of Chemical Corps warhead programs	CW - CRDL BW - Ft Detrick
1145-1245	IV.	Lunch	
1245-1330	V.	Discuss approach to conduct of study, assign responsibilities, establish necessary contacts for coordination and liaison	
1330-1400	VI.	Summary & conclusions	
1400	VII.	Adjournment	

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

27 July 1961

REPLIES TO QUESTIONS ASKED CONCERNING THE REGULUS I (U)

1.(C)In reply to various questions asked concerning the REGULUS I, the following statements were made:

a. The REGULUS I has a 35,000 ft ceiling and an 830 ft CEP.

b. The capacity of the warhead is 40 cu ft. It may be increased to 45 cu ft by extension into the aft section of the missile.

c. The warhead compartment has a maximum diameter of 44" which slopes down to a maximum of 16" diameter in the nose. Depth of the warhead cavity (by extension into the aft section) is 70".

d. The rated payload is 3,000 lbs. Chance-Vought has conducted some preliminary work on wing tanks and ~~further that~~ it was possible to mount two 75-gallon capacity tanks (one on each wing) at the wing hinge. The maximum weight was estimated to be 1,000 lbs.

e. The effect on the range with wing tanks was not given and apparently this factor has not been determined.

2. (C) Present Naval capability with the REGULUS II is as follows:

2 Submarines,	2	missiles	each	- Total	4
2 "	4	"	"	- "	8
1 Cruiser,	5	"	"	- "	5
				Total	17 missiles.

3. (C) The REGULUS II with its present warhead is operational and a number of flights have been conducted. It is possible for a submarine to surface and launch a missile in approximately 20 minutes. The control of a missile may be passed from one submarine to another. However, it requires a separate guidance system for each missile launched.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 14 August 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 15 (29 Jul - 12 Aug 1961).

2. Place of visit: Ft Belvoir, Virginia, and OCCMLO, Washington 25, D. C.

3. Person performing travel: Major Andrew J. Armstrong.

4. Purpose of visit: To attend Disaster Recovery Course #1 and coordinate changes in CMLCD 61-4 with OCCMLO.

5. Persons contacted:

a. Captain James M. Turner, OCCMLO

b. Captain John A. Callanan, OCCMLO

c. Staff and Faculty, The Engineer School (see DRC file in Rad Div).

6. Discussion and Accomplishments:

a. Course was successfully completed.

b. Course is not recommended for personnel of FRA. The scope of instruction is too elementary to offer further professional development for agency personnel.

c. The quality of the instruction ranged from poor to good with the preponderance being fair.

d. The administrative support afforded students was totally unsatisfactory.

e. Two visits were made to OCCMLO. The first was made on 4 Aug 1961 and the second was made on 10 Aug 1961. The result of these visits was approval of the proposed changes to CMLCD 61-4. Captain Callanan representing Combat Developments said that the study could now be distributed.

JACK E. BABCOCK
Colonel, CmlC
Commanding

Andrew J. Armstrong
ANDREW J. ARMSTRONG
Major, CmlC

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 22 August 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Number of days TDY: 13 (6-18 August 1961).

2. Place of visit: U. S. Army Ordnance Guided Missile School, Redstone Arsenal, Alabama.

3. Person performing travel: Capt P. S. Terlaje, Chemical Division.

4. Purpose of visit: To attend Ordnance Guided Missile Management Orientation Course 9-G-F1 Class Nr 2, Redstone Arsenal, Alabama.

5. Person contacted: Not applicable.

6. Reference: Not applicable.

7. Discussion:

The course outlines the Army's missile program, describes the operational and programmed weapons, and discusses the characteristics and purpose of each missile. The course was very informative and worthwhile.

8. Recommendation: That Mr. Gaines of this Agency be sent to attend the course, since it will have a definite impact on the work performed by him for the Chemical Division.

XC: Consider this in the schools program.

P. S. Terlaje

P. S. TERLAJE
Captain, CmlC
Chemical Division

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-X 22 August 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is hereby made:

1. Number of days on TDY: 6. (13-18 August 1961.)

2. Person performing travel: Dr. John H. Gardner, Civilian, GS-15.

3. Places visited: OCCmlO, Washington, D. C., and Army Chemical Center, Maryland (CmlC Board, MATCOM, and CRDL).

4. Specific purpose of visit: In connection with study projects CMLCD 59-5, 61-11, 61-12, and 61-13.

5. Persons contacted:

a. At OCCmlO: Maj J. J. Sugrue, Capt J. A. Callanan, Lt Col L. J. Stefani; Mr. Rex Pimlott, Sr. and Mr. Robert McQuain (RDCOM).

b. At CmlC Board: Col F. M. Arthur, Mr. John Traina, and Mr. Joseph Schaeffer.

c. At MATCOM: Mr. William Junkin and Mr. Frank M. Abbruscato.

d. At CRDL: Mr. Norman Reich.

6. Accomplishments of temporary duty travel:

a. On CMLCD 59-5:

(1) At Chemical Corps Board:

Discussed Board comments with Colonel Arthur and Mr. Traina. In addition to a number of detailed comments which will be adopted, it was suggested that the paper should include more narrative illustrations describing tactical use of the agent and weapons considered. Also, a comparison with other weapons was recommended. These suggestions were vetoed in OCCmlO. Some results of tests were obtained from Mr. Schaeffer. These will result in a minor change in the report.

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(2) At OCCml0:

The Board comments on CMLCD 59-5 were reviewed in detail with Major Sugrue and Captain Callanan. They accepted the detailed comments. On the general comments, see par 6a(1) above. Further, they recommended modification of the organization statement for the M55-M91 Rocket-launcher System.

b. On CMLCD 61-11, 61-12, and 61-13:

(1) At OCCml0:

Mr. Pimlott and Mr. McQuain stated that RDCOM cannot furnish data on warheads or drones for a considerable time to come. Letter, CMLMO-CD, Combat Development Study Directives: CMLCD 61-11, CMLCD 61-12, and CMLCD 61-13, 4 August 1961, directs that chemical data on warheads be taken from CmlC Board CW weapons effects study. It should also have indicated that biological data should be taken from CMLCD 57-4. This letter will be considered as a reply to letter, CMLFR-C, subject as above, 9 August 1961. No data are as yet available on drones.

(2) At MATCOM:

Reviewed status of logistic sequence papers with Mr. Junkin and Mr. Abbruscato. This can be summarized as follows:

(a) On the biological warhead for SERGEANT, the paper is in draft form, requiring editing, and will be sent during the week of 21 August 1961. There will be some gaps due to lack of information available to MATCOM. These gaps will be filled by addenda as the information becomes available.

(b) On the SD-2 drone, the paper will be prepared as completely as possible early in September 1961.

(c) There is almost a complete lack of information on the SD-5. This paper will be prepared as soon as the information is available to MATCOM.

(d) Because of difficulties in communication which have developed between MATCOM and FRA, it is believed that personal contact between the working personnel in the two organizations is essential. It was agreed that, as a first step, Mr. Junkin and perhaps others from MATCOM should visit FRA early in September to meet and confer with all personnel concerned in the mutual problems.

c. On miscellaneous projects:

(1) At OCCml0:

(a) The report on CMLCD 61T16 will be forwarded to CONARC. When this is done, the project will be considered complete.

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(b) The report on CMLCD 58-4 is still being staffed. Approval is expected.

(c) CMLCD 62-19 is required by DCSOPS to justify a forthcoming test. It must be done.

(d) A letter is coming on CMLCD 60-7. It will be cancelled, but a short staff study must be prepared on the M55 rocket.

(2) At CRDL:

Completion of CMLCD 59-5 developed a number of knowledge requirements. These were delivered to Mr. Reich, who is in charge of the pick-up and persistence work. Several will probably be satisfied in the near future.

John H. Gardner

JOHN H. GARDNER
Scientific Advisor

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-B 6 September 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is made:

1. Number of days on TDY: 6 (21 Aug 1961 - 26 Aug 1961).

2. Places of visit: Fort Detrick, Frederick, Maryland, and Army Chemical Center, Maryland.

3. Person performing travel: Dr. Donald F. Restool, GS-14, U. S. Army Chemical Corps Field Requirements Agency, Fort McClellan, Alabama.

4. Purpose of visit: a. To discuss warning requirements, systems, and communications with representatives of the Biological Laboratories, Chemical Research and Development Laboratories, and the U. S. Army Electronic Proving Ground regarding studies CMLCD 61-8, "Organizational and Operational Concepts of a Chemical Early Warning System (U)," and CMLCD 61-9, "Organizational and Operational Concepts of a Biological Rapid Warning System (U)."

b. To discuss biological and chemical drones relative to study CMLCD 62-7, "Operational and Logistical Concepts for Chemical and Biological Modules for Army Drone Systems (U)."

5. Persons contacted:

a. Dr. Charles Phillips, Chief, Physical Defense Division, Biological Laboratories.

b. Mr. Arthur Rawson, Chief, BW Detection Systems, Biological Laboratories.

c. Dr. Benjamin Warshowsky, Chief, Physical Detection Branch, Biological Laboratories.

d. Captain John Kirsch, Assistant Chief, Physical Defense Division, Biological Laboratories.

e. Captain Walter E. Campbell, Electronic Proving Ground, Fort Huachuca, Arizona.

f. Mr. Ralph B. Marden, Electronic Proving Ground, Fort Huachuca, Arizona.

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3. Lt Colonel Douglas A. Brigden, U. S. Army Chemical Corps Field Requirements Agency, Fort McClellan, Alabama.

h. Mr. M. L. Matteson, BL Project Manager, Biological Laboratories.

i. Captain Robert Lockhoff, CRDL, Army Chemical Center, Maryland.

j. Mr. Charles Walker, CRDL Project Manager, Army Chemical Center, Maryland.

6. Report:

a. At Biological Laboratories.

(1) On 23 August 1961, a meeting was held at the Physical Defense Division regarding biological alarms. The following persons were present: Dr. Phillips, Mr. Rawson, Dr. Warshowsky, Lt Col Brigden, Captain Campbell, Mr. Harden, Captain Kirsch, and myself. After my presentation of the FRA concept of a biological rapid warning system, all agreed that the Army Area Communication System with its network of signal centers is the best solution to the problem of superimposing a biological warning system on the Field Army organization. In answer to my questions, Captain Campbell and Mr. Harden specifically stated that as far as they knew: (a) the Signal Corps can absorb the functions of a biological rapid warning system; (b) adequate transportation can be made available to haul a trailer for the biological sensor; and (c) the system can theoretically be operated without an increase in personnel in the Army Area Signal Company. From the discussion which followed, it appeared that the FRA approach to the biological warning system can be made entirely to the satisfaction of the Signal Corps. Dr. Warshowsky then gave an illustrated presentation on laboratory models of the devices under consideration as biological rapid warning sensors. Later, I met with Dr. Warshowsky and Captain Kirsch. They will send FRA copies of publications which give brief descriptions of devices and techniques being considered for future alarms. Mr. Rawson evinced great interest in the FRA approach to CMLCD 62-7 (D/RWS) and stated that he would like to visit FRA in the near future for a conference just before he attends the USAF Air Ground Operations School Indoctrination Course at Keesler AF Base, Mississippi. Captain Kirsch, who has previously attended the school, suggested that the school curriculum might be beneficial to both Mr. Rawson and me. Next, the Douglas Aircraft Contract was discussed. This contract became active again on 15 July 1961. There is nothing to report at this time regarding progress.

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(2) On 25 August 1961, I met with Mr. Matteson, Project Officer on the small B drone. Mr. Qualey, Project Officer on the big drone, was absent. Mr. Matteson described progress and stated that the standardization date remains firm. After considerable discussion of drone details, I brought up the subject of stated requirements of the drone directive (Project CMLCD 62-7). He was not aware of the requirements of the directive, but said he will be glad to furnish technological information. However, certain information is not yet available. I told him that FRA had written a letter to RADCOM requesting the information or a date when it could be furnished. Mr. Matteson said he knows now what FRA wants and as soon as RADCOM takes action on our letter, he will furnish all available information. Mr. Matteson also will relay the FRA requirement to Mr. Qualey for the big drones. Mr. Matteson will continue to keep FRA informed (he does a splendid job of this) and will request Mr. Qualey to do likewise.

b. At Chemical Research and Development Laboratories, Army Chemical Center, Maryland.

(1) On 24 August 1961, Lt Col Brigden and I were escorted by Captain Robert Lockhoff. The main purpose of my visit was to become acquainted with progress in the area of chemical rapid warning system and to determine relationships between C and B rapid warning systems. Models of recent LOPAIR instruments were demonstrated. We discussed alarm systems in general with Mr. Karpel, Mr. Shantz, and Captain Lockhoff. Lt Col Brigden emphasized the importance of keeping FRA informed of new developments. He explained the FRA mission and how CRDL can help the FRA mission which in turn will be of great assistance to CRDL in operational concepts for items, etc. In the course of the discussion, the determination was made that certain contract (HELPAR) documents were important. These were obtained and Lt Col Brigden and I spent some time reading them. These documents will be made available to FRA. Captain Lockhoff took Lt Col Brigden and me through a tour of the CRDL facilities.

(2) On 25 August 1961, I visited Mr. Charles Walker of Munitions Development Division. Mr. Don Cohen is now Project Officer on the big drone. Mr. Bob Wheeler is Project Officer on the small drone. As of this date, progress on both is essentially on schedule. The TC date is still firm. I advised Mr. Walker of our requirements in the directive of CMLCD 61-9 and he stated that he had already placed us on the distribution list for all information documents. Mr. Walker does not have a copy of the directive or the concepts paper which FRA circulated to all participating agencies last March. He gave me the information that a recent paper (Tech Memo 15-48, "Dissemination of Chemical Agents from Drones (U)," CRDL, 30 June 1961, contained the preliminary effects data FRA wants. The document was located and I read it. The answers FRA wants are in this document, so Mr. Walker will send FRA a copy immediately. Results of meeting with Mr. Walker and the drone Project Officers indicate that closer liaison between our organization will be achieved in the future.

6 September 1961

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SUBJECT: Report of TDY

7. Action required:

a. Continue preparation of draft of CMLCD 61-9 (Rapid Warning System) for coordination as soon as possible.

b. Continue preparation of CMLCD 62-7 (Drones) on the basis of available information. Fill in other information as it becomes available.

c. Maintain liaison with BL and CRDL as established by visit.

NOTE: Upon return from trip, I have been informed that: 1. USCMAAC has disapproved Interim Military Characteristics for a Biological Rapid Warning System and 2. Dr. Gardner (TDY report dated 22 Aug 61) has determined that MATCOM will prepare a paper on the small drone early in September 1961, and that a paper on the large drones will be prepared as soon as the necessary information becomes available.

ACTION: The impact of the disapproval of B/RWS Military Characteristics upon CMLCD 62-7 must be evaluated. Dr. Gardner's report regarding drones agrees with the information I received at BL and CRDL.

Donald F. Restcol
DONALD F. RESTCOL
Biologist
Biological Division

JOSEPH C. [illegible]
Lt Col, CmlC
Chief, Bio Div.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 6 September 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY - Lt Col Douglas A. Brigden

1. Number of days TDY: 8 (22-30 August 1961).

2. Places of visit: U. S. Army Chemical Corps Biological Laboratories, Fort Detrick, Maryland; U. S. Army Chemical Research and Development Laboratories, Army Chemical Center, Maryland; Office of the Chief Chemical Officer, Washington, D. C.; and Melpar, Incorporated, Arlington, Virginia.

3. Purpose of visit:

To accompany representatives (Capt Walter E. Campbell, U. S. Army Electronic Proving Ground, Fort Huachuca, and Mr. R. B. Marden, IBM Corporation, contractor's representative to EPG) on visits to BL and CRDL to discuss "Field Army Emergency Warning Systems."

b. To obtain technical information on detection and warning devices being developed by BL and CRDL and to coordinate matters related to project CMLCD 61-8, "Operational and Organizational Concepts of a Chemical Attack Early Warning System, 1965-1970 (U)."

c. To coordinate and discuss project report CMLCD 59-27, "Requirements for Chemical Corps-Trained Officers by MOS, Army in the Field, 1961-1965 (U)," with CD and personnel divisions, OCCmlO.

4. Persons contacted:

a. U. S. Army Chemical Corps Biological Laboratories, Fort Detrick, Maryland.

Dr. Phillips	Phy Def Dev Div
Mr. Rawson	Phy Def Dev Div
Dr. Warshowsky	Phy Def Dev Div
Mr. Hayward	Phy Def Dev Div
Maj Cronin	Phy Def Dev Div

b. U. S. Army Chemical Research and Development Laboratories, Army Chemical Center, Maryland.

Col D. E. Yanka	CO, CRDL
Lt Col Aylesworth	Exec O, CRDL
Mr. G. Fleming	C, Prot Dev Div and E41 Proj Mgr
Capt R. Lockhoff	Prot Dev Div Coordinator
Mr. B. Karpel	Actg Prot Div Chief
Mr. F. Shanty	Asst Div Chief, Prot Dev Div
Dr. S. Love	Chief, Alarms Branch
Mr. Tannenbaum	Lopair Project O
Mr. H. Carlon	Shopair Project O
Mr. P. D. Olejar	C, Tech Info Div
Mr. John Young	Group Ldr, Cml Aspects E41

c. Office of the Chief Chemical Officer.

Col A. W. Meetz	Actg DMO
Mr. N. E. Sills	Tech Advisor DMO
Lt Col L. J. Stefani	C, CD Div
Maj J. J. Sugrue	C, CD Br
Capt J. A. Callanan	CD Branch
Mr. S. Waxman	CD Branch
Maj L. O. Elsaesser	OE Branch Chief
Mr. R. E. Cummings	Org Alwc Section
Maj K. L. Stahl	Evaluation Section
Maj R. T. Keet	Plans and Prog Sec, Pers Div
Mrs. B. S. Kitchen	Plans and Prog Sec, Pers Div
Maj E. C. Pittenger, Jr.	Plans and Prog Sec, Pers Div

d. Melpar, Inc., Arlington, Virginia.

Dr. Donald M. MacArthur	Head, Cml-Bio Labs
Col James G. Anding, Ret	Proj O, CAD

5. Discussion:

a. At Biological Laboratories, representatives of EPG, Dr. Restool, and I received a briefing on the status and progress in biological alarm developments and a briefing on the scope of the alarm contract with Douglas Aircraft. Dr. Restool briefed the conferees on some of the details of project CMLCD 61-9. Laboratory models of alarms and alarm components were briefly viewed. The differences in biological detection and warning as compared to chemical agent detection and warning were discussed in some detail. It was generally concluded that the differences are great enough to preclude development and operational use of a combined or universal alarm in the immediate future.

b. At U. S. Army Chemical Research and Development Laboratories:

(1) Mr. Karpel, Dr. Love, and Capt Lockhoff briefed the EPG representatives and me on the functioning, capabilities, and limitations of chemical agent alarms in development. Developmental and research models were demonstrated. Problems of sensitivity and communication ideas were discussed. After departure of the EPG representatives, I briefed personnel of the Protective Development Division, CRDL, on project CMLCD 61-8. The need for improved communication concerning R and D progress and problems was stressed. Much information and many ideas were furnished to me by Laboratory personnel, who emphasized the need to determine realistic and valid requirements concerning particularly reaction time versus sensitivity. Lab personnel do not visualize a potential for developing a single item to accomplish all valid tasks, but rather, they foresee a family of sensing devices and verification detection and identification equipment integrated into an overall system.

(2) Mr. Karpel made arrangements to have CCFRA included on the distribution of contract reports produced by MELPAR. Of particular interest to us is the section of each report devoted to "Project CAD" (Criteria Analysis for Detection) which attempts to determine more realistic criteria for response times, sensitivities, ranges, etc.

(3) During my visit, key personnel were briefed on the mission of FRA, our part in the scheme of things as illustrated in the 74-point document and specifically the objective of CMLCD 61-8. The need to keep us informed of R and D progress and problems in the alarms and detection fields was emphasized at each office visited. Generally, personnel were not aware of the FRA program in the field of alarms and detection. In every instance they voiced agreement concerning the need for such investigations as are planned by CCFRA and initiated action in my presence to have FRA included on the distribution lists for pertinent information.

c. At the Office of the Chief Chemical Officer:

(1) Lt Col Stefani discussed the plans and problems pertaining to an expedited standardization for limited production of the E41. This entails the ultimate distribution of a limited production model to using units in a theater of operations, accompanied by required tentative literature on use, operation, and maintenance. Experience of the selected using units and maintenance elements will be used to further develop use concepts and literature for later general dissemination. The U. S. Army Chemical Corps School will be the principal action agency for DMO on development of tentative literature, and training programs. Engineering Command and Materiel Command will develop maintenance and supply procedures. CCFRA's task in connection with the E41 will be to maintain liaison with these elements in order to obtain information as it develops for consideration

in CCFRA's overall alarm system projects and to advise the other elements on ideas and problems concerning the overall picture and ultimate goals that may influence current decisions on the E41, which is recognized as an initial interim alarm.

(2) The need for information as it is developed was discussed with CD personnel. A number of items which we had not received were pointed out. The CD action personnel had not realized our involvement in these matters. Assigned responsibilities and programmed projects were discussed with the objective of making action personnel aware of our continuing need for information on actions taken by the Chemical Corps, USCONARC, and DA on matters affecting our projects. Arrangements were made to have certain correspondence not previously furnished forwarded to this Agency. For example, this Agency was never informed on USCONARC's action on MC's for a BW Rapid Warning System prepared by Dr. Restool and which has a specific impact on project CMLCD 61-9. Major Stahl made arrangements to have copies of this correspondence forwarded to FRA.

(3) Coordination on CMLCD 59-27 with Personnel Division, OCCmlO, was not accomplished because the officer (Major Pittinger) assigned action on this report had received orders on short notice for PCS and was departing the day of my visit. However, the report was discussed with CD Division personnel. Tentative agreement was reached to use the initial draft as the final report for distribution only to Chemical Corps elements as a source of information. Distribution is to be accomplished by a letter over the command line of the Chief Chemical Officer. The letter will reflect the Chief's position on matters discussed in the report and will give guidance concerning use of the report. Since FRA has furnished copies to the Chemical Corps Board and the Chemical Corps Training Command for comments, the letter of distribution will be held up until the comments have been received and reviewed. I agreed to send the comments received and FRA's reaction to the comments to the Chief, CD Division, OCCmlO, for consideration in preparation of the Chief Chemical Officer's letter terminating the project and distributing the report.

d. At MELPAR, Inc, I briefed Dr. MacArthur and Col Anding on the objectives and plan of action of CMLCD 61-8 and on our interests in their work. They briefed me on their work with emphasis on project CAD. Much of the information being assembled and evaluated by MELPAR under the subtitle "Criteria Analysis for Detection" is essential to project CMLCD 61-8 and can be expected to save us much time in running down background documents. Brief review of the work being done gave me the impression that MELPAR was doing an excellent job of determining and explaining more realistic criteria for alarm sensitivity and reaction time.

6. Results: Since this was a general liaison visit specific to alarms and detection matters related to project CMLCD 61-8, no specific recommendations are made. A number of incidental matters were taken care of for other persons of the Agency. Information on these matters has been passed on to the individuals concerned. However, much valuable detail was gathered, better understanding and relationships between FRA and other elements of the Corps were fostered, and the value of personal visits of project officers to enhance the exchange of information was reconfirmed.

DOUGLAS A. BRIGDEN
Lt Col, CmlC

[illegible]
Fort McClellan, Alabama

[illegible]   [illegible] August [illegible]

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 2(24 Aug - 25 Aug 1961).

2. Place of visit: Fort Detrick, Frederick, Maryland

3. Person performing travel: 1/Lt William F. Filipkowski CmlC

4. Purpose of visit: CP-1 Meeting, Incapacitating Biological Systems.

5. Persons contacted:

a. Mr. J. R. L. Smith, Ft Detrick

b. Mr. Bentley, Munitions Division, Ft Detrick

c. Mr. [illegible] Greene, Munitions Division, Ft Detrick

6. Discussion and accomplishments:

CP-1 was opened at 1000 hours by Brig. Gen. Delmore. Major General Stubbs followed speaking on the present need for incapacitating biological agents. Mr. [illegible] Hayward presented the conferees with technical information on incapacitating biological agents, and on the vehicles intended for their employment.

Col. Dodd of the CMLC Board with Lt Col Them presented a hypothetical combat situation on the employment of incapacitating biological agents. Lunch followed the CMLC Board's presentation and an executive session followed the lunch period. I was not included in the executive session, so I proceeded to the Munitions Division. There I conferred with Mr. J. R. E. Smith, Mr. Bentley, and Mr. A. Greene on the Sergeant. Mr. Greene assured me that target effectiveness estimates data would be sent to Field Requirements Agency as soon as possible. In addition, I requested that Field Requirements Agency be given all information, regarding the Sergeant and drones, distributed by the Munitions Division at Ft. Detrick, Maryland.

The results of the executive session can be obtained by contacting Lt. Col. R. J. Harris, Chief, Technical Division, U. S. Army CmlC Sch. Lt Col Harris was the U. S. A. CmlC Eng. Comd representative for the session.

William Filipkowski
WILLIAM F. FILIPKOWSKI
1Lt, CmlC

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C 12 September 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Number of days TDY: 4 (6-9 September 1961).

2. Place of visit: Missile Division, U. S. Army Artillery and Missile Board, Fort Bliss, Texas.

3. Person performing travel: Mr. Joseph A. Gaines, Chemical Division.

4. Purpose of visit: To attend a conference for the review and revision of proposed military characteristics (MC's) for Missile B.

5. Persons contacted: Conferees (Incl 1).

6. Reference: Report of Project No FA 462: "Draft Military Characteristics for Division Support Missile (Missile B)."

7. Discussion:

a. Missile B. This was a working conference, and its purpose was accomplished. Essentially, the conference allowed the Artillery (missile users) to arrive at mutually agreeable proposed MC's with Ordnance (ABMA and AOMC) personnel (missile developers). The three Chemical Corps personnel present took part in those areas of discussion relating to chemical warhead armament for Missile B. Draft copies of the proposed MC's (6 above) were issued to each conferee and hand revisions were made therein as the meeting progressed. I returned my work copy to FRA for further reference as required. Missile B is a LR project with development just getting underway. The MC's prepared at this conference will be sent to USCONARC for approval sometime in October 1961. Copies will be sent simultaneously to the Chief Chemical Officer and other reviewers for final comment. QMR's for Missile B non-nuclear warheads will be prepared for each type of warhead at a later date by the services concerned.

b. Other Information.

(1) Study CMLCD 62-22. At the request of Biological Division, warhead payload compartment dimensions and cost-per-round figures were obtained for the NIKE-HERCULES.

UNCLASSIFIED

(2) Possible Artillery officer assignment. Lt Col Morris L. Shoss, CDD, USAAMS, Fort Sill, Oklahoma, expressed interest in helping FRA obtain a replacement for Captain Easton. He will discuss the assignment with the Assistant Commandant, USAAMS.

(3) Proposed consolidation of QMR's and MC's. It was reported at this conference that DA is favorably considering a proposal to merge QMR's and MC's into one document (to be called QMR's).

8. Recommendations:

a. That the proposed MC's (hand revised) brought from the conference be retained until replaced by the edition which is to be sent to USCONARC in October 1961.

b. That developmental progress on Missile B be followed by FRA in all matters relating to armament and employment.

Joseph A. Gaines

1 Incl
Conferees

JOSEPH A. GAINES
Chemical Division

PERSONNEL PARTICIPATING IN MISSILE B CONFERENCE

7 - 8 SEPTEMBER 1961

Lt Col John W. Ervin	Missile Div, USA Artillery Board
Lt Col U. Grant Jones, Jr.	DCD, USACGSC
Lt Col Morris L. Shoss	CDD/USAAMS, Fort Sill, Okla
Lt Col Frank C. Gay	ABMA, Control Office, RSA, Ala
Major R. C. Lutz	CDD, USAAMS, Fort Sill, Okla
Major W. A. Walker	OSWD, USCONARC, Fort Bliss, Texas
Major D. L. Davis	USA Abn and Elct Bd, Fort Bragg, N.C.
Capt A. Stallman	CDO, USAIS, Fort Benning, Georgia
Capt J. S. Farrington	AOMC, R&D, Redstone Arsenal, Ala
Capt C. E. Graves	AOMC, MA&T, Redstone Arsenal, Ala
Lt Charles H. Tatham	ABMA, Control Office, RSA, Ala
Mr. Charles W. Wingfield	ABMA, R&D, Redstone Arsenal, Ala
Mr. Roy C. Rogers, Jr.	" " " "
Mr. Walter W. Kopcha	" " " "
Mr. David A. Mendel	" " " "
Mr. Henry A. Dihm	" " " "
Mr. Arthur A. Smith	" " " "
Mr. Robert W. Emrick	ABMA, FSO, Redstone Arsenal, Ala
Mr. Donald J. Ifshin	" R&D " "
Mr. Norman L. Comus	" " " "
Mr. Frank J. Sgambelluri	Picatinny Arsenal, ORDBB-TTS
Mr. Moe M. Goldy	Ord Sp Wpns-Ammo Comd, ORDSW-WS
Mr. Frank L. Messersmith	ABMA, RDO, Redstone Arsenal, Ala
Mr. Joseph A. Gaines	USA CmlC Fld Rqr Agcy, Fort McClellan, Ala
Mr. Thomas W. Tranberg	CRDL, USA Chemical Center, Maryland
Mr. John L. Kratzer	" " "
Major William Humphries (Conf Ldr & Msl "B" Project O)	Msl Div, USA Arty Bd
Colonel Street	Chief, Msl Div, USA Arty Bd, Fort Bliss, Texas

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 2 October 1961

MEMO FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted.

1. Number of days on TDY: 22 days (9 Sept - 30 Sept 1961)

2. Place of visit: U. S. Army Management School, Ft Belvoir, Va.

3. Person performing travel: Henry P. Whitten, GS-14.

4. Purpose of visit: To attend the U. S. Army Management School (Course Nr 62-1, 10 Sept - 29 Sept 1961).

5. Persons contacted: Not applicable.

6. Accomplishments of TDY:

a. Completed Army Management School Course Nr 62-1. Notebooks concerning the material covered in the course were furnished to each student. My notebooks will be kept in the Radiological Division, and will be available for anyone who desires to review them.

b. There were 50 members of the class including personnel from the Army, Navy, Air Force, and Marine Corps. Two other individuals from the U. S. Army Chemical Corps attended the course: Mr. E. L. Sawyer, USA CmlC Bd; and Mr. W. M. Riley, Dugway Proving Ground.

c. The course was exceptionally good. The guest speaker program was outstanding. The portion of the course dealing with "creativity" was especially interesting and will be beneficial in the preparation of combat development studies.

d. On 20 September 1961 I visited OCCmlO and conferred informally with the following personnel: Major Sugrue, Capt Callanan, Mr. Sills, Capt Turner, and Lt Col Whitesides. I was informed by Major Sugrue and Capt Callanan that CMLCD 60-13 had been approved, that CMLCD 61-4 had been forwarded to USCONARC for approval, and that the Directive Package for CMLCD 61-1 had been approved (with a minor change in dates in the title of the study).

e. Capt Turner showed me the study that he had prepared concerning the responsibilities for radiac instruments. The study recommends that the Chemical Corps take over all responsibilities for radiac instruments at this time except maintenance, and that the Chemical Corps assume the maintenance responsibilities when the organization for ROAD becomes firm. Capt Turner plans to use the summary of the FRA study, CMLFR 5-61, as one of the annexes to his study. Capt Turner is now staffing his study in OCCmlO. He will send us a copy when the study is completed.

7. Recommendation: It is recommended that other personnel in FRA (Division Chiefs, Scientific Advisor, Project Officers, etc.) be scheduled to attend the U. S. Army Management School.

H. P. WHITTEN
Physicist, Rad Div

Chief, RW Division

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 19 September 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days: 7 (10-16 September 1961).

2. Place of visit: Medical Field Service School, Fort Sam Houston, Texas

3. Person performing travel: Major Henry T. Uhrig.

4. Purpose of visit: To attend the Thirteenth Army Medical Service Instructors Conference

5. Personnel Contacted: Col Frank Neuman, Chief Nuclear Science; Col E. Chapman, CO,Med Service Combat Developments Group; Lt Col Ross, Chief Mil Science Div; Lt Col J. Rumer, Chief Mil Med & Surgery Div; Lt Col St. John, Asst Chief Mil Science Div; Lt Col Donald Behrens, Nuclear Science Div; Lt Col E. Marks, Nuclear Science Div; Lt Col T. Britton, Med Representative, The Infantry School; Lt Col R. Boyson, Med Representative CGSC; Maj R. Stone, Med Service Combat Developments; Maj Sam Foti, Nuclear Science.

6. Accomplishment on TDY:

a. Attended Thirteenth Army Medical Service Instructors Conference (program attached).

b. Discussed TOE Nr 8-36E (Draft) for Medical Battalion ROAD with Lt Col St. John, Mil Science Div MFSS. A Chemical Officer and Chemical Staff Specialist appear in the draft TOE. This generated a good deal of interest from the people in the Military Science Div MFSS.

c. Discussed collective protection with Maj R. Stone, Med Serv CD Group. He is very much interested in collective protection shelters as a requirement of the Medical Service. Maj Stone gave me a copy of the study report on Conversion of Tents, Vehicles and Bunkers to Collective Protection Shelters.

d. Obtained reprints of two articles from the Nuclear Science Division, MFSS:

(1) Some Medical Aspects of Radioactively Contaminated Water in the Field Army.

(2) Report: Practical Guidance for Handling Radioactively Contaminated Patients in Medical Facilities.

HENRY T. UHRIG
Major, MC
Rad Div, CCFRA

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-B 14 September 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

1. Persons performing travel:

Lt Col R. A. Munn, Jr., Armor, USACCFRA.
Lt Col D. A. Brigden, CmlC, USACCFRA.
Maj J. G. Brunt, CmlC, U. S. Army CmlC School.

2. Number of days: 3. (11-13 September 1961)

3. Place visited: U. S. Army CmlC Board, Army Cml Center, Maryland.

4. Purpose of visit: To assist the CmlC Board in preparation of Chemical Corps contributions for Project CGSC 61-8, RODAC-70.

5. Persons contacted:

Col Frank Arthur
Dr. E. Hollingsworth
Lt Col Martin Massoglia, CMLC, USACGSC.

6. Discussion and Results:

a. As an introduction to the problem, the basic concept study and task assignments were read. The principal task charged to the Chemical Corps is the preparation of Chapter 11, "CBR Operations." Col Arthur briefed us on an outline to this chapter prepared by the Board and requested that CCFRA prepare the concepts of organization, including mission statement, organizational block diagrams, total strength requirements, major items of equipment (from the RODAC LIST), and concepts of operations applicable to the organizations. He also requested that CCFRA and the school prepare general background statements and concepts pertinent to tactical smoke and flame, and Radiological protection.

b. Through discussion, broad organizational concepts for smoke and rocket support were agreed on. Essentially, this envisions a Cml Rocket Bn and a Smoke Gen Bn, each assigned to Corps for general support and a Cml Company with dual missions for smoke and rocket support organic to divisions for general support.

CMLFR-B 14 September 1961
SUBJECT: Report of TDY

c. Col Massoglia discussed the background to the project and informally discussed some of the attitudes at USACGSC. He indicated that the "door is open" to include anything reasonable in this project report. The basic guidance furnished calls for a Cml Rocket Bn, but no mention of smoke is made.

d. We agreed to work out the details requested by Col Arthur and have them couriered to him by the morning of 19 September. Maj Brunt agreed to act as courier. In order to expedite transmission of our contributions, they will be handled as "working papers" which will be returned to FRA. Maj Brunt agreed to develop the RAD portion. Lt Col Munn and Lt Col Brigden agreed to develop the Organizational Concepts and the background general concepts pertinent to smoke and flame.

e. It was also agreed that Col Arthur would integrate the material furnished by U. S. Army CmlC School and FRA into the overall report and then handcarry the draft to Fort McClellan for coordination and concurrence. Col Arthur plans to arrive on 21 September for this coordination. We agreed to make arrangements for clerical support to wrap up the final report during his visit.

7. Recommendations:

a. That the agreements reached during the conference be approved.

b. That U. S. Army CmlC School detail the Arty Instructor to assist in development of concepts and organization for the Rocket units.

RICHARD A. MUNN, JR.	D. A. BRIGDEN	J. G. BRUNT
Lt Col, Armor	Lt Col, CmlC	Major, CmlC
Biological Division	Chemical Division	U. S. Army CmlC School

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-D 19 September 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Person Performing Travel: Mr. Douglas E. Wilson, Program Coordinating Officer, GS-12.

2. Number of Days TDY: 7 (11-17 Sept 1961).

3. Places Visited: Army Chemical Center, Maryland; Office, Chief Chemical Officer, DA; and Washington, D. C.

4. Purposes of Visit:

a. To assist Lt Col R. A. Munn and Lt Col D. A. Brigden in planning and coordinating assistance to US Army CmlC Board in preparing material for CDOG Project CGSC 61-8, "RODAC-70."

b. To coordinate details of scheduling CCFRA program (FY 62 - 63) with office of Director for Military Operations, OCCmlO.

c. To attend the 16th Annual Convention of The Armed Forces Chemical Association as a representative of CCFRA and of the Fort McClellan Chapter, AFCA.

5. Persons Talked With:

a. At US Army CmlC Board:

Col Frank M. Arthur
Dr. E. C. Hollingsworth
Col Donald D. Bodé
Lt Col Martin F. Massoglia (USA CGSC)

b. At OCCmlO:

Lt Col Louis J. Stefani
Maj Jon J. Sugrue
Capt John A. Callanan
Mr. Seymour Waxman

CMLFR-D 19 September 1961
SUBJECT: Report of TDY

c. At AFCA Convention:

Mr. Simon Askin, President
Mr. Edgar Newhouser, Executive Director
Lt Col O. E. Roberts (USAR - Ret), Secretary-Treasurer
Other members of the Board of Directors
and many of the delegates

6. Discussion:

a. The work on RODAC-70 at US Army CmlC Board has been covered separately in a memorandum for record, "Report of TDY," by Lt Col R. A. Munn, Lt Col D. A. Brigden, and Major J. G. Brunt (US Army CmlC School), 15 Sept 1961. I participated in the discussions on the afternoon of 12 September and the morning of 13 September 1961, and concurred in the agreements reached by 1200 hours on the latter date.

b. At OCCmlO on 13 and 15 September 1961, the following points were clarified or resolved:

(1) CMLCD 60-7 is canceled as a CD project. FRA will prepare a paper on logistical procedures for the M55 rocket, which may be given a CMLFR project number is desired.

(2) CMLCD 62-19 may be redesignated as Phase I of CMLCD 63T6, if desired, although OCCmlO sees no particular advantage in such action. CMLCD 62-19 (however designated) is to be initiated in FY 62, and the test phase of CMLCD 63T6 in FY 63. If a shortage of project officers makes it difficult to initiate all projects as scheduled, FRA should recommend some other project (preferably a non-CDOG one, and not a test project) for slippage.

(3) Four typewritten copies of Phase II, CMLCD 58-7, will be adequate for submission to OCCmlO, since final distribution outside that office is not contemplated.

(4) CMLCD 58-4 is now being reviewed, and will probably be approved without any significant changes.

(5) CMLCD 62T31 and 62T32 may be combined under the first of these project numbers, with the recommended title of "Casualty Effectiveness of Chemical and Biological Munitions (U)."

(6) OCCmlO has not been consulted about any change in warhead requirements for Missile "B" from those now printed in CDOG, and would probably not concur in the change which, as reported by Mr. Gaines from his attendance at the Fort Bliss conference of 7-8 September 1961, has been unilaterally decided on by the Artillery.

CMLFR-D 19 September 1961
SUBJECT: Report of TDY

(7) OCCml0 has not been notified by DCSLOG of any limitation on expenditure of funds for TDY travel in FY 62, and considers it probable that no such limitation will be imposed on FRA.

c. At the Statler-Hilton Hotel, Washington, D. C., I attended the meeting of the Board of Directors and Executive Committee of the Armed Forces Chemical Association on 13 September 1961, and the sessions of the AFCA Convention on 14 and 15 September. A separate report on these proceedings will be made to the officers and directors (and, if desired, to the general membership) of the Fort McClellan Chapter, AFCA.

7. Recommendations:

To avoid unnecessary changes in numbering and titling of projects, it is recommended that CMLCD 62-19 remain as shown in the draft CmlC Program instead of being changed to Phase I of CMLCD 63T6.

DOUGLAS E. WILSON
Program Coordinating Officer

AGENDA

"Technical Conference on Detection, Warning, and Identification of CW Agents"

Monday, 25 September 1961

Opening Remarks	Dr. P. E. Rett Dr. O. M. MacArthur
Criteria Analysis for CW Alarm Systems	Col J. G. Anding
Chemical Detection Techniques	
CW Reagent Studies	Dr. G. T. Davis
Electrochemical Systems	Dr. R. H. Johns
Spontaneous Electrochemical Technique	Dr. W. J. Barrett
Clathrate Compounds	Dr. J. M. Shackleford
Polymer Unzipping	Dr. H. E. Podall
E34 Kit Reagents	Dr. S. Warner

Tuesday, 26 September 1961

Infrared Alarm Systems	
New Systems	
Shopair	Mr. Lee Sherman
Large Aperture Passive Lopair	Mr. G. J. Lutz
Interferometer Lopair	Mr. K. J. Stetlen
Reduction of Spurious Signals	
Scintillation	Mr. N. E. Steere
Scintillation Data Processing	Dr. S. M. Sussman
Fixed Filter Systems	Mr. J. F. Coughlin
Pneumatic Detectors	Mr. M. Liston
Dual Detector Systems	Mr. S. Cravitt

Feasibility Studies

Passive Lopair	Mr. K. J. Stetten

Wednesday, 27 September 1961

Physical Detection Techniques

Hydrogen Flame Detector	Mr. J. E. Chaney
Organic Semiconductors	Dr. M. M. Labes Mr. M. Donahoe
Gas Chromatography	Dr. V. R. Huebner
Resonance Gas Tuning	Dr. E. Langberg
Contact Potential	Mr. F. Briden
Flourescence	Mr. S. Haitsuka
Concentration Techniques	Mr. J. H. Chandet

Thursday, 28 September 1961

Biochemical Techniques

Direct Reaction Studies	Mr. W. F. Herblin
Competitive Reaction Studies	Mr. W. F. Herblin
Enzyme Modification Flow System	Mr. F. L. Aldrich
Effect of K Agents of Lower Organism	Mr. H. T. Kemp
Sensory Detection of K Agents by Insects and Other Organisms	Dr. R. M. Roppel

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7) (U)

1 April - 30 June 1961

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)
1 April - 30 June 1961

SECTION I - INTRODUCTION

1. (U) The U. S. Army Chemical Corps Field Requirements Agency during the period reported on (fourth quarter, Fiscal Year 1961) operated under provisions of Chemical Corps Regulation Nr 10-18, "U. S. Army Chemical Corps Field Requirements Agency," dated 28 February 1961. The Agency (hereinafter referred to as CCFRA) was stationed at Fort McClellan, Alabama; assigned as a Class II activity under the jurisdiction of the Chief Chemical Officer, with staff supervision and operational control by the Director for Military Operations; and attached for administrative and logistical support to the U. S. Army Chemical Corps Training Command. The Commanding Officer of CCFRA until 25 April 1961 was Colonel Joseph S. Terrell, Jr., 053118, Chemical Corps; after that date, Lt Col David C. Smith, Jr., 043394, Chemical Corps. The Historian was Douglas E. Wilson (GS-12), Program Coordinating Officer and Documentation Officer. Where no entry or an incomplete entry is made in the sections that follow, it is to be understood that no change has occurred since the end of the last reporting period.

SECTION II - POLICY

2. (U) Mission and Responsibilities. No change.

3. (U) Programs and Projects. The work of CCFRA in carrying out its missions and responsibilities has continued as described in previous reports, with no change in the system of numbering projects outlined in the report for 1 January - 31 March 1961. Action on all numbered projects is summarized in Section III below, and separate progress reports on all current projects are attached in Annex A.

4. (U) Organization and Administration.

a. On 8 May 1961 the Chief Chemical Officer approved the organization for CCFRA which had been recommended in August 1960, and the chart for which had been submitted on 15 March 1961. This provides for the addition of an Operations Division and for the replacement of the Documentation Office by a Technical Planning Office. The names of the Chemical Warfare, Biological Warfare, and Radiological Warfare Divisions are changed to the Chemical, Biological, and Radiological Divisions, respectively.

b. However, it was decided to re-study the requirements for a separate Operations Division, and meanwhile to make no change in the actual organization or Table of Distribution of the Agency. The change in the names of the three working divisions, which had previously been made informally was now officially confirmed.

c. No changes were made in authorized officer, enlisted, or civilian spaces. At the end of the quarter, the Agency was under strength one officer, not counting four six-month RFA lieutenants, two of whom were about to return to civilian life. The Agency was understrength three enlisted men and two civilians, one civilian being hired temporarily for summer employment only. On 30 June 1961, the various divisions and offices were at the strengths shown:

	Authorized				Assigned			
	Off	EM	Civ	Total	Off	EM	Civ	Total
Office of the CO	4	0	2	6	2	0	2	4
Admin Office	1	2	2	5	1	2	2	5
Documentation Office	0	0	2	2	0	0	2	2
Chemical Division	6*	4	3	13	6	2	2	10
Biological Division	4*	3	3	10	6*	3	3	12
Radiological Division	6*	3	3	12	5*	2	2	9
	21*	12	15	48	20*	9	13	42

5. (U) Changes in Key Personnel.

a. Assigned.

(1) Capt Julian E. Buckner, assigned to CCFRA in January 1961, with TDY en route to attend the Associate Chemical Officer Career Course at the Chemical Corps School, joined on 27 May 1961 and was detailed for duty as Chemical Staff Officer, Radiological Division.

(2) 2d Lt Wayne L. Smith was assigned to CCFRA, joining on 9 June 1961, and was detailed for duty as Chemical Staff Officer, Biological Division.

b. Departed.

(1) Col Joseph S. Terrell, Jr., Commanding Officer, departed 25 April 1961 for assignment as Chemical Officer, Eighth U. S. Army, Korea.

(2) Major Gerald B. Hoover, Nuclear Effects Engineer, Radiological Division, departed 26 June 1961 for assignment to the Staff and Faculty, U. S. Army Air Defense School, Fort Bliss, Texas.

(3) Capt Edmund J. Kennedy, III, Chemical Staff Officer, Radiological Division, was transferred to the Infantry and departed 15 June 1961 for assignment to the 25th Infantry Division, Okinawa.

(4) Mr. David J. Greer, Chemist-Logistician, Chemical Division, departed on 5 May 1961 for a position at Redstone Arsenal, U. S. Army, Huntsville, Alabama.

*Includes one Infantry (Cml Div), one Armor (Biol Div), and one Artillery and one Medical Corps (Radl Div) authorized; no Infantry officer assigned. All others Chemical Corps.

c. Changes in Duty.

(1) Lt Col David C. Smith, Deputy Commander, became Commanding Officer 25 April 1961 on the departure of Colonel J. S. Terrell (see 5b(1) above).

(2) Lt Col Woodrow W. Reagan, R&D Coordinator, was assigned primary duty as Deputy Commander on 22 May 1961, having acted in this capacity since 25 April 1961 as an additional duty, and was relieved of primary duty as R&D Coordinator.

(3) Lt Col Douthit L. Furches, Chemical Staff Officer, Chemical Division, was assigned primary duty as Chief, Chemical Division, on 1 May 1961.

d. Changes in Command. The following officers successively assumed command, as announced by CCFRA General Orders on the dates indicated:

(1) Lt Col David C. Smith (in the temporary absence of Colonel Terrell), GO Nr 5, 1 April 1961.

(2) Lt Col Woodrow W. Reagan (in the temporary absence of Colonel Terrell and Lt Col Smith), GO Nr 6, 7 April 1961.

(3) Lt Col Smith, GO Nr 7, 10 April 1961.

(4) Lt Col Reagan (in the temporary absence of Lt Col Smith), GO Nr 8, 15 May 1961.

(5) Lt Col Smith, GO Nr 9, 19 May 1961.

(6) Lt Col Reagan (in the temporary absence of Lt Col Smith), GO Nr 10, 27 May 1961.

(7) Lt Col Smith, GO Nr 11, 7 June 1961.

(8) Lt Col Reagan (in the temporary absence of Lt Col Smith), GO Nr 12, 28 June 1961.

6. (U) Initiation or Cancellation of Major Programs or Projects. No major programs were initiated or cancelled during the period reported on. Projects initiated and terminated are shown in Section III below, and in reports of separate projects, Annex A.

7. (U) Fiscal Information Bearing upon Mission or Responsibilities.

a. No increases were made in allotment of funds in either Budget Program 2000 (performance of mission) or 2100 (TDY for military personnel to attend schools).

b. Because of inability to hire civilian personnel to fill vacancies as soon as they occurred, and because it became apparent that the expenses of Troop Test CMLCD 61T16 would be less than was originally expected, it was estimated that a considerable surplus in the Agency's funds would exist at the end of the fiscal year. To prevent such a development, the following amounts were reported as available for reallotment within the Chemical Corps, and were withdrawn from the Agency's funding program:

PEA 2040.13 (Troop Tests)	$43,715
PEA 2050.42 (Combat Developments)	15,085
PEA 2100.00 (TDY for Schools)	100
TOTAL	$58,900

This reduced this Agency's total allotment from $184,900 to $126,000.

c. Of the remaining $126,000, over 99.9% was obligated by the end of the fiscal year. Only $16.50 remained unobligated in Budget Program 2000 and $40.71 in Budget Program 2100, for a total of $57.21.

d. Information received from the Comptroller, OCCmlO, indicated that the following funds would be recommended for allotment to CCFRA as the annual funding program for Fiscal Year 1962:

Budget Program 2000	$189,000
Budget Program 2100	2,000
TOTAL FUNDED	$191,000
Unfinanced Requirements	2,960
TOTAL REQUIREMENTS	$193,960

8. (U) Relationships with Other Agencies. No change was made in basic liaison relationships and procedures. Conferences and meetings at Fort McClellan of CCFRA personnel with members of other agencies are reported in Section IV below. Reports of liaison and other TDY trips in connection with CCFRA activities are attached in Annex B.

SECTION III - OPERATIONS, ACTIVITIES, AND ACCOMPLISHMENTS

9. (C) The following projects, on which the progress reports are attached in Annex A, were in progress during the period reported on:

a. Finite Combat Development Projects assigned by OCCmlO:

CMLCD	TITLE
57-1	Air Delivery of Smoke by Army Aircraft (U)
58-4	CW Field Decontamination Requirements (U)

58-7 Impact of CBR Operations on Requirements for CmlC Personnel and Units (U) - Phase II, Requirements for Chemical Corps Units in the Army in the Field (U)

59-3 Evaluation of BW Field Sampling (U)

59-5 The Tactical Use of V Agents (U)

59-16 Application of ADPS to Chemical Corps Field Problems (U) - Phase II, Systems Analysis (U)

59-17 Chemical Corps Participation in Combat Deception (U) - cancelled in this quarter.

59-27 Requirements for Chemical Corps-Trained Officers by MOS, Army in the Field, 1961-1965 (U)

60-7 Supply Procedures for Chemical Corps Class V Materiel in Support of Army Operations (U)

60-13 Organization for Radiological Survey in CONUS (U)

61-1 Organization for Radiological Survey, 1965-1970 (U)

61-4 Requirements for Radiological Monitoring of Personnel, Supplies, and Equipment in CONUS (U)

61-7 Employment of Tactical Radiological Warfare (U)

61-8 Organizational and Operational Concepts of a CW Early Warning System (U)

61-9 Organizational and Operational Concepts of a BW Early Warning System, 1965-1970 (U)

61-11 Concepts for Employment of Chemical Warheads for the LITTLE JOHN Rocket (U)

61-12 Concepts for Employment of Biological Warheads for the SERGEANT Missile (U)

61-13 Concepts for Employment of Chemical Warheads for the SERGEANT Missile (U)

61T16 Capability of the Smoke Generator Company to Man the M55 Area Toxic Rocket System (U)

62-7 Operational and Logistical Concepts for Chemical and Biological Modules for Army Drone Systems (U).

b. Finite Actions and Short-Term Projects Directed by OCCmlO, Requested by Other Agencies, or Initiated by CCFRA.

CMLFR	TITLE
1	Comments, Reviews, Conferences, and Contributions to Doctrine (U), subdivided as follows:
	1a - Atomic and Radiological
	1b - Biological Weapons Systems
	1c - Chemical Weapons Systems
	1d - C&B Defense
	1e - Everything Else
	1f - (added) Flame and Smoke
2-61	Information Required for Biological Field Contamination Tests (U)
5-61	Maintenance of Radiac Equipment (U)
6-61	Lobber Delivery of CBR Agents (C) - Short Title, Clobber (U)

c. Continuing Projects and Functions Initiated by CCFRA.

CMLIP	TITLE
1	Planning and Scheduling of Combat Developments Projects (U)
2	Analysis and Abstracting of Reports, Studies, and Publications (U)
3	Army Doctrinal Guidance Statements (U)
4	Orientation of Students, CmlC School (U)
5	Program Review and Analysis (U)
7	Means of Delivery and Dissemination of CW Agents (U)
9	Army Organization (U)
10	Background Information for FRA Projects (U).

10. (U) Explanation and Conduct of Projects. No change was made in procedure for conduct or numbering of projects, except that a new subdivision was added to CMLFR-1 (see para 9b above).

11. (U) Projects Started. No new CMLCD projects were started during the quarter. New CMLFR projects were 5-61 and 6-61. The project directive for CMLCD 61-8 was received.

12. (U) Projects Completed or Cancelled.

a. Final reports on projects CMLCD 59-3, 61-4, and 61T16 were forwarded to OCCmlO for approval.

b. Project CMLCD 57-1, previously completed, was approved by OCCmlO and distributed on 8 May 1961. No information had been received by the end of the quarter on the status of CMLCD 60-13, forwarded for approval in the previous quarter.

c. The final report on CMLCD 60-3, "The Use of Fallout and Induced Contamination (U)," with its conclusions and recommendations deleted, was redesignated a CCFRA Staff Paper and was distributed to those agencies with which it had originally been coordinated. This action followed the reversal of an earlier decision not to distribute the study (see para 12b, CCFRA Historical Report for 2nd Quarter, FY 1961).

d. Projects CMLCD 58-4 and 59-5, forwarded to OCCmlO for approval in the previous quarter, were returned for further revision, to be completed by 31 August 1961.

e. Project CMLCD 59-17 was cancelled by authority of USCONARC, inasmuch as all the information available on the subject had already been covered in a USA CGSC study.

13. (U) Tripartite Conference Activities. No plans for CCFRA participation in the Sixteenth Tripartite Conference on Toxicological Warfare had been made by the end of this period.

14. (U) Combat Developments Program Planning.

a. Changes Nr 4 to the CCFRA Operating Program were issued as of 5 June 1961. They included changes in mission, increases in personnel authorization, decreases in funds (owing to turn-in of surplus, as explained in para 7 above), addition of new CMLFR projects, and changes in titles and/or scheduling of various CMLCD projects.

b. Since the draft of the Combat Developments portion of the Chemical Corps Operating Program had not been received by the end of the quarter, program planning proceeded on the assumption that all the projects proposed by CCFRA on 3 February 1961 would be approved. It was understood unofficially that some of these projects would probably not be approved, but it was not known which ones these would be.

SECTION IV - EVENTS

15. (U) Many of the events of most historical interest or importance during this period are included in the quarterly progress reports on projects, attached in Annex A, and the reports of TDY, attached in Annex B.

CCFRA personnel participated in a large number of conferences and meetings at Fort McClellan with representatives of Headquarters, U. S. Army Chemical Corps Training Command and/or the U. S. Army Chemical Corps School; however, while all these discussions contributed in some degree to the accomplishment of CCFRA's mission, it is considered that the majority of them were not significant enough in themselves to be included in this report. The most important of these, and other events of particular interest not covered in the annexes (including all visits by representatives of agencies outside Fort McClellan), are briefly summarized in the following paragraphs.

16. (U) (24 March - 2 April 61) Captain Uhrig attended the Armed Forces Medical Symposium at Sandia Base, New Mexico.

17. (U) (2 - 15 April) Captain William C. Kuykendall and Capt James H. Shaffer, both CmlC-USAR, were attached to CCFRA for two weeks active duty as mobilization designees. Captain Kuykendall prepared a staff study titled "A Survey of Radiological Decontamination Studies in Cold Weather Environments (U)," and Captain Shaffer prepared a staff study titled "Non-Standard Decay Rates in Areas Contaminated with Radioactive Materials (U)," both for the Radiological Division.

18. (U) (3 - 8 April) Major Brigden, Captain Pederson, Captain Roark, and Dr. Restool attended the CBR Weapons Orientation Course Nr. 13A-61 at Dugway Proving Ground, Utah.

19. (U) (5 April) Mr. John L. Trebilcock, U. S. Army CmlC Engineering Command, visited CCFRA to consult with LtCol Smith, LtCol Stephens, Major Price, Captain Easton, and Captain P. E. Chamberlain (of U. S. Army Artillery School, then on TDY at Ft McClellan to participate as an evaluator for Troop Test CMLCD 61T16) on problems connected with the M55 Rocket and its container tube and launcher.

20. (U) (18 April) Major W. A. O. Pearce, RE, Joint School of Nuclear and Chemical Ground Defence, U.K., visited CCFRA and conferred with Lt Col Stephens, Major Hoover, Captain Uhrig, Captain Pederson, and Mr. Whitten on various problems of radiological protection, survey, and casualty estimation.

21. (U) (19 April) Colonel S. E. Baker, Commanding Officer, USA Chemical Corps Intelligence Agency, visited CCFRA and discussed problems of common interest with Lt Col Smith and other Agency personnel.

22. (U) (19 April) Lt Col James R. Chapman and Captain C. L. Pittman, Jr., Special Operations Division, USA CmlC Biological Laboratories, visited CCFRA and discussed S. O. Division activities with Lt Col Hiett, Dr. Restool, and other personnel of the Biological Division.

23. (U) (4 May) Lt Col Munn attended a conference on the organization of division chemical sections with Major Burnham, Hq, USA CmlC Training Command, and other personnel of Training Command and the CmlC School.

24. (U) (8-10 May) Colonel C. B. Drennon, CmlC Liaison Officer at USA Combat Developments Experimentation Center (CDEC), Fort Ord, California, visited CCFRA on a regular liaison trip. He conferred with Lt Col Smith, Lt Col Reagan, division chiefs, and other Agency personnel on the integration of CBR problems into CDEC experiments, for which he requested suggestions and recommendations from CCFRA.

25. (U) (16 May) Mr. W. H. Snyder of the U. S. Army Quartermaster Board visited CCFRA to discuss CBR implications for graves registration activities under future warfare concepts with Lt Col Smith and other members of the Agency.

26. (U) (18 May) Lt Col Reagan and Dr. Gardner attended a meeting of the John H. Forney Historical Society at Gadsden, Alabama.

27. (U) (19 May) Colonel Joseph Goldstein, Office of The Surgeon General, DA, visited CCFRA and discussed matters of common interest with LtCol Smith, Major Hoover, Captain Uhrig, Captain Pederson, and Mr. Whitten.

28. (U) (19-20 May) Lt Col James H. Watts, CmlC representative with the U. S. Army Standardization Group, U. K., visited CCFRA and was briefed by Lt Col Smith, division chiefs, and other Agency personnel on recent and current projects in the CCFRA program and conceptual developments of interest to Lt Col Watts.

29. (U) (21-24 May) Lt Col C. A. Morgan, Jr., Executive Officer, DMO, OCCmlO, visited CCFRA and discussed various problems concerning combat development activities with Lt Col Smith, Lt Col Reagan, the division chiefs, and other Agency personnel.

30. (U) (21 May - 2 June) Lt Col Robert Dyal, CmlC-USAR, was attached to CCFRA for two weeks active duty as a mobilization designee. He prepared a paper on "Anticrop Munition Systems (U)" for the Biological Division.

31. (U) (29 May) Lt Col Moon Jung Ho, Republic of Korea Army; Lt Col Yoshio Tsuzuki, Japanese Army; and Captain Johannes Jensen, Danish Army, visited CCFRA and were briefed by Lt Col Smith, Lt Col Reagan, and the division chiefs on the mission, organization, and operations of the Agency.

32. (U) (30 May - 2 June) Captain Pederson represented CCFRA at the Army Radiac and Nuclear Surveillance Conference in Washington, D. C. (see report of TDY in Annex B).

33. (U) (7 June) CCFRA received a letter of appreciation from the Commanding Officer, USA CmlC Tng Comd, for the outstanding record achieved in the annual United States Savings Bond Canvass, in which

95% of the Agency's eligible personnel participated. Major Price, as Agency Bond Canvasser, was given special recognition for his efforts in making this record possible.

34. (U) (10-18 June) Dr. Gardner attended the Weapons Orientation Advanced (WOA) Course Nr 169 at Sandia Base, New Mexico.

35. (U) (11-24 June) 1st Lt Tsun K. Lee, CmlC-USAR, was attached to CCFRA for two weeks active duty as a mobilization designee. He prepared a paper on "Large-Scale Cultivation of Biological Agents (U)" for the Biological Division.

36. (U) (19 June) Major General Marshall Stubbs, Chief Chemical Officer, U. S. Army; Air Force Brigadier General Jean-Raymond Thiry, Lt Col Pierre Georges Ricaud, Lt Col Henri Coulomp, and Lt (JG) Bernard C. J. Hirigoyen, all of the Ministry of Armed Forces, France, visited CCFRA and were briefed by Lt Col Smith, Lt Col Reagan, and the division chiefs on the mission, organization, and operations of the Agency.

37. (U) (20-23 June) Lt Col Stephens attended the CBR Weapons Orientation Course Nr 22-61 at Dugway Proving Ground as a member of the Chemical Corps Advisory Committee to the CBRWOC.

38. (U) (23 June) Colonel D. G. M. Fletcher, War Office; Colonel E. M. Hall, War Office; Wing Commander E. J. B. Brown, Air Ministry; Colonel G. W. Reid, British Army Staff; Lt Col K. A. Foster, Joint School of Nuclear and Chemical Ground Defence; and Professor J. H. Turnbull, War Office (all U. K.) visited CCFRA and were briefed by Lt Col Reagan, Dr. Gardner, and the division chiefs on the mission, organization, and study program of the Agency.

39. (U) (29 June) Colonel Claude J. Merrill, Deputy DMO, OCCmlO, visited CCFRA and was briefed on the organization, operations, and study program of the Agency by Lt Col Reagan, Dr. Gardner, and the division chiefs.

[redacted]

UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7) (U)

1 April - 30 June 1961

ANNEX A

INITIAL PROJECT REPORTS

AND

QUARTERLY PROGRESS REPORTS

When the accompanying classified papers are withdrawn this paper becomes UNCLASSIFIED

[redacted]

UNCLASSIFIED

PROJECT OFFICER SP4 Harris

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 57-1.

TITLE: Air Delivery of Smoke by Army Aircraft (U).

REPORT: The Final Draft was approved with a few minor changes, by OCCmlO.

The Final Report was distributed 8 May 1961.

ESTIMATED DATE OF COMPLETION: Completed.

ESTIMATED MAN-HOURS THIS QUARTER: 77.

FUTURE PLANS: None.

PROJECT OFFICER Capt Coe

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 58-4.

TITLE: Chemical Field Decontamination Requirements.

REPORT: Comments received from OCCmlO on 7 April 1961. Comments from agencies outside the Chemical Corps have been resolved; however, those received from the CmlC Board and OCCmlO require clarification before preparation of final report. The project officer will visit both of the Chemical Corps offices during the week of 10-14 July 1961 for the purpose of trying to resolve their comments so that the finalized report can be sent to OCCmlO for approval and distribution.

ESTIMATED DATE OF COMPLETION: 15 September 1961.

ESTIMATED MAN-HOURS THIS QUARTER: 194.

FUTURE PLANS: Completion of project.

PROJECT OFFICER Lt Col Munn

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 58-7, Phase II.

TITLE: Requirements for Chemical Corps Units in the Field Army.

REPORT: The initial draft is approximately 95% completed. With the implementation of the concept originally known as ROAD 65 moved forward to 1962, and another revision of the army structure already being planned, the almost-completed study appears to be outdated prior to publication, which indicates that the project should be cancelled.

ESTIMATED DATE OF COMPLETION:

ESTIMATED MAN-HOURS THIS QUARTER: 179.

FUTURE PLANS: Consider cancelling the project.

PROJECT OFFICER: Capt Roark

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

Date: 30 June 1961

PROJECT NUMBER: CMLCD 59-3

TITLE: Evaluation of Biological Field Sampling (U)

REPORT: The final report was forwarded to the Office of the Chief Chemical Officer for approval on 12 May 1961. No comment, as yet, has been received, and any further action is dependent on OCCml0.

ESTIMATED DATE OF COMPLETION: N/A

ESTIMATED MANHOURS THIS QUARTER: 121

FUTURE PLANS: Further action will be as directed by OCCml0.

PROJECT OFFICER Dr. Gardner

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 59-5.

TITLE: The Tactical Use of V Agents.

REPORT: Data received from USACRDL divisions on pick-up and persistence of VX are being analyzed to evaluate the potential use of this agent in barrier plans as well as to estimate friendly troop safety factors in exploitation of a VX attack on the enemy. Also, the relative vulnerability of troops as affected by variations in clothing is being investigated, including U. S. and potential enemy forces.

ESTIMATED DATE OF COMPLETION: Undetermined at present.

ESTIMATED MAN-HOURS THIS QUARTER: 480.

FUTURE PLANS: Complete above investigations so that correct conclusions can be made.

PROJECT OFFICER Lt Phillips

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 59-16, Phase II.

TITLE: Application of Automatic Data Processing System(s)(ADPS) to Chemical Corps Field Activities.

REPORT: 1. Lt J. R. Phillips has replaced Mr. D. J. Greer as project officer for CMLCD 59-16. Mr. Greer has departed FRA.

2. The component parts of CMLCD 59-16 will be issued under separate covers per letter OCCmlO, 26 April 1961.

Part 1. "Chemical Supply Systems Analysis" (U. S. Army CmlC School): The initial draft was issued for review and comment on 13 June 1961.

Part 2. "CBR Intelligence Systems Analysis" (CCIA): This study was deleted from CMLCD 59-16 per letter OCCmlO, 12 June 1961.

Part 3. "Radiological Activities Systems Analysis" (Capt J. E. Buckner, FRA): Capt Buckner has taken this study over from Maj G. B. Hoover who has been reassigned from FRA. That portion of the study pertaining to fallout prediction is approximately 30% completed.

Part 4. "Systems Analysis for One Employment of Toxic C and B Munitions" (Lt J. R. Phillips, FRA): Little work has been done on this study during the past quarter, and it remains about 20% complete.

ESTIMATED DATE OF COMPLETION:

Part 1: 15 August 1961.

Part 3: 30 September 1962.

Part 4: 31 July 1962.

ESTIMATED MAN-HOURS THIS QUARTER: 1,191 (total).

FUTURE PLANS:

Part 1: Final Report to be issued 15 August 1961.

Part 3: Continued study of background and related reference material will be made by project officer. Concentrated effort is being placed on systems analysis of fallout prediction.

Part 4: Work will be resumed during the next quarter.

PROJECT OFFICER Lt Phillips

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 59-17.

TITLE: Chemical Corps Participation in Combat Deception.

REPORT: Upon our recommendation, this project was recommended for cancellation by OCCml0 12 June 1961. USCONARC approved the cancellation 22 June 1961.

ESTIMATED DATE OF COMPLETION: NA.

ESTIMATED MAN-HOURS THIS QUARTER: 0.

FUTURE PLANS: None.

PROJECT OFFICER Maj Brigden

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLCD 59-27

TITLE: Requirements for CmlC Trained Officers by MOS - Army in the Field.

REPORT: The Project Officer has completed an initial draft which is currently being coordinated in this Agency.

ESTIMATED DATE OF COMPLETION: 31 October 61.

ESTIMATED MAN-HOURS THIS QUARTER: 452.

FUTURE PLANS: Initial coordination within the Agency is planned to be completed by 14 July 1961. It is anticipated that locally generated comments can be incorporated by 29 July 1961. Final Agency review and preparation for coordination with CmlC School, Bd, and CD and Pers Div, OCCmlO, should be completed early enough to meet the 31 Aug 61 target date for distribution of the Initial Draft. It is not planned to coordinate this report outside of the Chemical Corps unless external coordination is authorized after review by OCCmlO. This is not a CDOG Project.

PROJECT OFFICER: Mr. Whitten

DATE: 30 June 1961

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

PROJECT NUMBER: CMLCD 60-3

TITLE: Use of Fallout and Induced Radioactive Contamination (U)

REPORT: As directed by reference 2 below, the study was redesignated as an U.S. Army Chemical Corps Field Requirements Agency Staff Paper and distributed for information only to those agencies with whom the study had been coordinated. The conclusions and recommendations were deleted from the study.

ESTIMATED DATE OF COMPLETION: Completed.

ESTIMATED MAN-HOURS DEVOTED TO PROJECT: 50.

REFERENCES: 1. Letter, CMLCD-CD, OCCm10, 20 Jan 60, subject: "Use of Fallout and Induced Contamination (U)."

2. Letter, CMLMO-CD, OCCm10, 19 Apr 61, subject, "Use of Fallout and Induced Contamination (U)."

FUTURE PLANS: None. Project completed.

PROJECT OFFICER Capt Coe

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 60-7

TITLE: Supply Procedures for Chemical Corps Class V Materiel in Support of Army Operations (U).

REPORT: Little work has been accomplished since the Project Plan was returned by OCCml0 on 13 Feb 61. The Project Plan as originally submitted included all chemical field munitions; however, this was changed by the OCCml0 and now includes only CmlC Class V materiel. Since this materiel is so limited, some thought is being given to requesting that the project be cancelled.

ESTIMATED DATE OF COMPLETION: 31 December 1961.

ESTIMATED MAN-HOURS THIS QUARTER: 0.

FUTURE PLANS: Will depend on FRA recommendation and action by OCCml0 regarding possible cancellation.

PROJECT OFFICER: Capt Pederson

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLCD 60-13

TITLE: Organization for Radiological Survey in CONUS (U)

REPORT: No change in progress since last report. Comments made by Lt Col MacWilliams during the internal review of the final draft report at OCCmlO were discussed on 31 May 1961 with the project officer during his visit to that headquarters. Discussion will be of help in preparing the final report for distribution since it was indicated that a few changes would be required.

ESTIMATED DATE OF COMPLETION: Completed.

ESTIMATED MANHOURS THIS QUARTER: None.

FUTURE PLANS: To make necessary changes as directed by OCCmlO and distribute after approval.

PROJECT OFFICER: Capt Baston

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLCD 61-1

TITLE: Organization for Radiological Survey, 1965-1970 (U)

REPORT: The project officer completed two field trips during this quarter to obtain background information for the study. One trip was made to USA CGSC, Fort Leavenworth, Kansas; and the other to USAAS, Fort Rucker, Alabama and USAIS, Fort Benning, Georgia. A tentative decision has been made to complete the study in two phases. This decision is subject to approval by DMO, OCCmlO. Phase I will develop division requirements based on the ROAD-65 divisions. Phase II will develop corps, field army, and communications zone requirements and will be based on the organizational structure of these echelons for the 1965-70 time frame. The proposed organizational structure for the corps and field army, for this time frame, is currently being staffed at USCONARC and DA.

ESTIMATED COMPLETION DATE: Initial Uncoordinated draft: 31 December 1961.
Final Coordinated draft: 31 March 1962.

ESTIMATED MANHOURS THIS QUARTER: 77

FUTURE PLANS: Continue work on study until completed.

PROJECT OFFICER: Maj. Armstrong

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLCD 61-4

TITLE: Radiological Monitoring of Personnel, Supplies and Equipment in CONUS (U)

REPORT: Project was returned by OCCmlO recommending certain changes in content and distribution list. OCCmlO directed distribution upon incorporation of changes. Work is continuing.

ESTIMATED DATE OF COMPLETION: 31 August 1961.

ESTIMATED MANHOURS THIS QUARTER: 292

FUTURE PLANS: Discussion will be conducted with interested agency members, report rewritten, and distribution instituted.

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

PROJECT OFFICER: Mr. Whitten

DATE: 30 June 1961

PROJECT NUMBER: CMLCD 61-7

TITLE: Employment of Tactical Radiological Warfare (U)

REPORT: 1. This project was originally assigned to the U.S. Army Chemical Corps Board by letter, MCLPD-CD, OCCm10, 26 Jan 60, Study Project CMLCD 61-7, "Employment of Tactical Radiological Warfare (U)." The project was formally transferred to FRA on 8 June 1960 (see reference below).

2. A preliminary draft was completed and one copy each was forwarded to U.S. Army Chemical Corps Board, U.S. Army Chemical Corps Nuclear Defense Laboratory, and U.S. Army Chemical Corps Operations Research Group for informal review by personnel from these agencies.

3. A trip was made to Army Chemical Center on 26 and 27 June 1961 to discuss the project. The report was discussed in conferences with personnel from the agencies mentioned in paragraph 2 above. Valuable suggestions were obtained pertinent to the study in that the personnel contacted had worked on the previous RW project (1948-1954) and were very knowledgeable on the subject.

ESTIMATED DATE OF COMPLETION: Initial draft - 1 Oct 1961.
Final draft - 31 Dec 1961.

ESTIMATED MAN-HOURS DEVOTED TO PROJECT: 481.

REFERENCE: Letter, CMLPD-CD, OCCm10, 8 June 1960, "Study Project CMLCD 61-7, 'Employment of Tactical Radiological Warfare.'"

FUTURE PLANS: Suggestions and comments made by personnel at ACC (see par 2 above) will be incorporated in the study. An initial draft will be finalized and coordinated within FRA.

PROJECT OFFICER Maj Brigden

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 61-8.

TITLE: Organizational and Operational Concepts of a Chemical Attack Early Warning System (U).

REPORT: No progress. Project directive was received from OCCmlO 12 12 June 1961. Since CMLCD 59-27 is so near completion, it is planned to continue with that project before beginning CMLCD 61-8. Work on 61-8 should begin some time in the latter part of August, while 59-27 is being coordinated. In a telephone conversation on 13 June 1961, Captain Sugrue, CMLDMO-CD, approved 30 March 1962 as the target date for completion of the initial draft and 30 June 1962 as the target date for the final report.

ESTIMATED DATE OF COMPLETION: 30 June 1962.

ESTIMATED MAN-HOURS THIS QUARTER: 8.

FUTURE PLANS: Anticipate conference with visitors from USAEPG during the latter part of July concerning pertinent communications problems. Plan to visit BL, CL, and OCCmlO with representatives of EPG after conference here, to gather and discuss technical background. Will begin in September to prepare discussion of detailed requirements for chemical attacking warning. This aspect of the study should be completed in initial draft form by 15 October 1961. See attached plan for balance of actions.

TIME PHASING PLAN, CMLCD 61-8

	FY 62			
	1Q	2Q	3Q	4Q
Determine requirements and draft requirements annex.	XXXXXXX			
Develop state-of-the-art discussion and draft annex.	XXXXXXX			
Develop optimum system based on items to become available by 1965 and draft annex.	XXXXXXX			
Develop hypothetical system as objective to be obtained through high priority effort by 1970. Draft annex.		XXXXXXX		
Assemble draft report and coordinate in FRA.			XXXXXXX	
Coordinate draft report with other agencies.				XXX
Incorporate comments and forward for approval.				XXX

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

Date: 30 June 1961

PROJECT NUMBER: CMLCD 61-9

TITLE: Organizational and Operational Concepts of a BW Early Warning System (U)

REPORT: Part of the anticipated data expected to result from current Chemical Corps contract activity has been received and is presently being incorporated, as appropriate, into the study. Since contract activities are at least seven months behind, it has been decided to complete the project, using existing data.

As a result of previous delays, a request has been made to extend the deadline for submission of the final report to 31 October 1961.

ESTIMATED DATE OF COMPLETION: 31 October 1961

ESTIMATED MANHOURS THIS QUARTER: 430

FUTURE PLANS: Assuming approval of extension of final reporting date, complete report in accordance with this revised schedule.

PROJECT OFFICER None assigned

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 61-10.

TITLE: Field Army Requirements for Chemical Corps Service Support, 1965-1970 (U).

REPORT: A letter was written by OCCmlO to USCONARC on 30 March 1961 recommending cancellation of this project, per letter ATSWD-R 461(C), USCONARC, 30 December 1960, subject: "Combat Developments Study Program (U)." This study was not included in FRA's FY 62 program and is assumed to have been cancelled.

PROJECT OFFICER Mr. Mahaffie

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 61-11.

TITLE: Concepts for Employment of Chemical Warheads for the LITTLE JOHN Rocket (U).

REPORT: Training Command was advised, by a letter dated 1 June 1961, that OCCml0 verbally approved our proposed logistical sequence from port of debarkation to launching site and that Training Command could use the proposed sequence for the portion of the sequence concerned in par 6b(4) of the project directive.

Information copies of Tech Info Little John, Leakage & its Effects on Personnel, & assembly and disassembly techniques for the chemical warhead for Little John rockets were received. Also, a revised Maintenance Support Plan & Criteria for the Renovation, Demilitarization & Disposal of the GB filled Little John Warhead were received from MATCOM 1 June 1961.

This project is on schedule except for R&D's target effectiveness estimates, which are necessary for our calculations. The project is approximately 75% complete and the initial draft is scheduled for completion by 30 September 1961.

ESTIMATED DATE OF COMPLETION: 31 December 1961.

ESTIMATED MAN-HOURS THIS QUARTER: 124.

FUTURE PLANS: Complete project upon receipt of R&D's target effectiveness estimates.

PROJECT OFFICER: Capt Roark &
Lt Filipkowski

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

Date: 30 June 1961

PROJECT NUMBER: CMLCD 61-12

TITLE: Concepts for Employment of Biological Warheads for the SERGEANT Missile (U)

REPORT: The project plan, project outline, and bibliography were forwarded to participating agencies on 8 June 1961. Preliminary information from participating agencies has been received. Final information, including organizational aspects from Training Command and target effectiveness data from RADCOM, is due 15 July 1961. OCCml0 has not yet made available comments on preliminary logistic sequence submitted by FRA to Training Command.

ESTIMATED DATE OF COMPLETION: 31 December 1961.

ESTIMATED MANHOURS THIS QUARTER: 225

FUTURE PLANS: Complete project in accordance with schedule set forth in the approved project directive.

PROJECT OFFICER Capt Terlaje

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 61-13.

TITLE: Concepts for Employment of Chemical Warheads for the SERGEANT Missile (U).

REPORT: 1. Verbal approval has been given by OCCml0 on the proposed logistical sequences from port of debarkation to the launching site for the warhead and module. A letter was dispatched 1 June 1961 to P&T Div, Training Command, advising them to use the proposed logistical sequence as outlined in letter, CMLFR-B, USACCFRA, 20 Apr 61, subject: "Warhead and Module Logistic Support (U)."

2. Information copies of maintenance support plan, criteria for the renovation, demilitarization and disposal and safety criteria for the chemical warhead for the SERGEANT missile were received from MATCOM 1 Jun 61. Also, information copies of Tech Info SERGEANT, Leakage and Its Effect on Personnel, and assembly and disassembly techniques for the SERGEANT missile chemical warhead were received.

3. This project is on time with the exception of R&D's target effectiveness estimates, which are necessary for our calculations. The project is approximately 75% completed. The initial draft is scheduled for completion by 30 September 1961.

ESTIMATED DATE OF COMPLETION: 31 December 1961.

ESTIMATED MAN-HOURS THIS QUARTER: 50.

FUTURE PLANS: Complete project upon receipt of R&D's target effectiveness estimates.

PROJECT OFFICER Capt Easton

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLCD 61T16

TITLE: Troop Test, Capability of the Smoke Generator Company to Man the 115mm Area Toxic Rocket (U).

REPORT:

1. Military Evaluation Report published and distributed.

2. Final Test Report written and coordinated with the U. S Army Artillery and Missile School, Fort Sill, Oklahoma; OCCm10; and the Chemical Section, USCONARC.

3. Final Test Report forwarded to OCCm10 on 22 May 1961.

4. Requested changes to the Final Test Report forwarded to OCCm10 on 21 June 1961. Changes were made to permit an alternate course of action for fulfilling the requirement for launcher prime mover drivers and to reflect TOE changes based on TOE 3-267E rather than TOE 3-267D.

ESTIMATED DATE OF COMPLETION: Completed.

ESTIMATED MAN-HOURS THIS QUARTER: 511.

FUTURE PLANS: None.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

Date: 30 June 1961

PROJECT NUMBER: CMLCD 62-7

TITLE: Operational and Logistical Concepts for Chemical and Biological Modules for Army Drone Systems (U)

REPORT: By correspondence from OCCml0, dated 12 May 1961, FRA request of 22 March 1961 for extension of final report by an additional nine months to conform to an anticipated extension of Phase IV tests was disapproved.

Approximately 60 percent of the I phase has been completed. In lieu of the disapproval for extension of due date, the tempo of work has been increased to meet the existing schedule.

ESTIMATED DATE OF COMPLETION: 31 December 1961

ESTIMATED MANHOURS THIS QUARTER: 98

FUTURE PLANS: Complete study in accordance with the schedule set forth in the approved project directive.

Project Officers: Lt Col Hiett
Lt Col Stephens
Lt Col Furches

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

Date: 30 June 1961

PROJECT NUMBER: CMLFR-1

TITLE: Comments, Reviews, Conferences, and Contributions to Doctrine (U)

REPORT: 1. Reviewed and (where appropriate) made comments on the following reports, studies, drafts, and other documents:

a. Draft changes to AR 320-5, "Dictionary of Army Terms" (CBR terminology only).

b. Draft DA Field Manuals or revisions thereof: FM 3-( ), "Operational Aspects of Radiological Defense (U)"; FM 3-( ), "Radiological Contamination Intelligence (U)"; FM 3-8, "Chemical Corps Reference Handbook"; Change 2, FM 21-41, "Soldier's Handbook for Nuclear, Biological, and Chemical Warfare"; Change 1, FM 21-48, "Chemical, Biological, and Radiological Training Exercises and Integrated Training."

c. Draft DA Training Circular: TC 3-( ), "Radiological Incidents and Radiological Contamination Control."

d. Draft DA Technical Manuals: TM 3-200 (revision), "Capabilities and Employment of Toxic Chemicals"; TM 3-4230-204-15, "Decontaminating Apparatus, Portable, DS2, 1½-Quart, M11"; TM 3-4240-201-12 & -35, " Filter Unit, Gas-Particulate, Hospital, Six-Man, 12 CFM, M7A1"; TM 3-4240-207-12 & -45, "Filter Unit, Gas-Particulate, 300 CFM, GED and EMD, ABC-M6"; TM 3-6665-207-12, "Radioactive Source Set, M3."

e. USCONARC, proposed Qualitative Materiel Requirements: "QMR for Head, Logistical Missile"; "QMR for an Improved 4.2-Inch Mortar (U)"; "Revised QMR for Operation Center Equipment"; "Establishment of QMR's" (QMR for smoke tank as a suitable delivery means for flame).

f. USCONARC, Draft Military Characteristics: "Draft MC's for Truck, Utility, High Mobility, Light Duty (U)."

g. Office of Special Weapons Development, Study Project OSWD 57-2, "Tactical Potential of Fallout (U)"; Study Project OSWD 61-1, "Army Requirements for Nuclear Weapons Effects Research (U)."

h. USA Nuclear Medical Research Detachment, Europe, "Transmittal of GRACMOP Board."

i. The Adjutant General Board, Study Project AGCCD 61-10, "Personnel Management in Support of the Field Army: Personnel Information Requirements for All Arms and Services, VIII - Evaluation and Estimates of CBR Status of the Individual and Unit Dosimetry System, 1965-70 (U)."

j. The Quartermaster Board, QMB Project Nr 24 (QMCCD 57-9), "Integrated Materials Handling Methods and Equipment."

k. USA Transportation Combat Developments Group, Supplement to Project TCCD 59-9, "Drones and Missiles in Logistical Supports," Part I: "Application of Drones."

l. OCCml0, letter on "Comparative Evaluation of Plutonium/ Alpha Radiac Instruments" (inclosure from USCONARC).

m. OCCml0, letter on "Shelf-Life of Impregnated Clothing."

n. OCCml0, letter on "CBR Material for Training Bulletin."

o. USA Cml C Board, Project Program for CMLCD 60T19, "Field Experiment: Operational Evaluation of VX (U)."

p. USA Cml C Board, letter on "Technical Data - M55 Launcher."

q. USA Cml C R & D Comd, "USArmy Research and Development Problems Guide (U)."

r. USA Cml C R & D Comd, documents on "Project WASP."

s. USA Cml C Nuclear Defense Laboratory, paper on "Waterless Decontamination Methods."

t. Dugway Proving Ground draft test plans: DPGTP 542, "Final Engineering Testing of Hycar Absorbent Protective Underwear"; DPGTP 572, "Final Engineering Testing of the Hood, Protective, E33R2 (U)"; DPGTP 585, "Range Table Firing Trials of M55 115-mm Rocket."

u. USA Cml C Representative, ABC Standardization Group, Amendment No. 4 (draft) to STANAG 2805-C, "Requirements for Ground Forces Equipment (U)."

v. USA Cml C Training Command, letter on "Maintenance Repair Time."

w. Blue Sky Suggestions, as follows: 61-30, "AGP Magnetic Smoke Compound"; 61-41, "Decontaminating Apparatus to be used as Disperser for BPL"; 61-47, "Standardized Warning Device"; 61-54, "Means of Increasing CBR Appreciation"; 61-55, "Modification of the M55 Rocket Launcher System"; 61-56, "Compressed Air Weapons"; 61-57, "Flame Weapons for Drone"; 61-58, "Meteorological Warfare"; 61-60, "Instrument for Quantitative Determination of Nerve Gas"; 61-61, "National Biological Monitoring System"; 61-62, "New Use for Psycho-Chemicals"; 61-63, "Soil Stripping for Removal of Strontium-90"; 61-66, "Radiation Shielding" (total, 13 items).

2. Reviewed motion picture script for training film, Project No. 115-2369, "Mixing and Evaluating M4 Thickened Flame Fuels," for USA CmlC School.

3. Prepared lesson plans on radiation dosimetry, to be used by Captain Uhrig in giving instruction to 7230 Course at USA CmlC School.

ESTIMATED DATE OF COMPLETION: Continuing.

MAN-HOURS THIS QUARTER:

	1a	1b	1c	1d	1e	1f	Total
Cml Division			39	41	72	26	178
Biol Division	1	357	16	47	193		614
Radl Division	343	13	64	12	49		481
Office of the CO*	10	27	60	16	107		220
Documentation Off	7	2	5	10	22	2	48
Total	361	399	184	126	443	28	1541

(*including R & D Coordinator)

FUTURE PLANS: Continue as required.

Date Received 11 April 1961

Completion Date _____

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
INITIAL PROJECT REPORT

TITLE: Maintenance of Radiac Equipment

PROJECT NUMBER: CMLFR 5-61.

PROJECT OFFICER: Capt Tedersen.

AUTHORITY: Letter, CMLMO, OCCmlC, 30 March 1961, subject: "Maintenance of Radiac Equipment"

OBJECTIVE: To develop a radiac equipment maintenance plan suitable for adoption and implementation by the US Army Chemical Corps.

SCOPE: The scope of this study will encompass, but not necessarily be limited to an appraisal of the current capability within the Chemical Corps to absorb a radiac maintenance and calibration support responsibility; organizational structure, personnel and equipment requirements; and formal training requirements necessary to provide personnel for the system developed.

ESTIMATED MANHOURS REQUIRED: 200.

RELATED PROJECTS: CMLCD 59-7, "Field Calibration of Radiac Instruments"

BACKGROUND:

1. The Chief Chemical Officer has recommended to the general staff that the responsibility for research and development, and complete logistics management of radiac equipment, electronic, be assigned to the Chemical Corps. This recommendation is currently under consideration by DCSLOG and OCRD.

2. Present maintenance support of radiac equipment constitutes a major weakness in the radiological defense posture of the Army today. If the Chemical Corps is assigned the responsibility for this support, it is imperative that adequate provisions be made to meet this responsibility rapidly and effectively.

ESTIMATED COMPLETION DATE: 30 June 1961.

REMARKS: None.

PROJECT OFFICER: Capt Pederson

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLFR 5-61

TITLE: Maintenance of Radiac Equipment.

REPORT: Documentary research and a study of the problems involved were made. Writing of the study project report is in progress, and will require approximately three additional weeks to complete. Since the estimated completion date was the date of this report, letter requesting the additional time was submitted to the OCCml0.

ESTIMATED DATE OF COMPLETION: 21 July 1961.

ESTIMATED MANHOURS THIS QUARTER: 101.

FUTURE PLANS: Complete project report and submit it to OCCml0.

Date Received 24 April 1961

Completion Date 30 September 1961

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
INITIAL PROJECT REPORT

TITLE: Lobber Delivery of CBR Agents (U) - Short Title, "CLOBBER" (U).

PROJECT NUMBER: CMLFR 6-61.

PROJECT OFFICER: Captain Terlaje.

AUTHORITY: Letter, CMLRO-CD, OCCml0, 17 April 1961, subject: CMLIP-7.

OBJECTIVE: To expand the FRA study (CMLIP-7) on the LOBBER as a means for CBR delivery.

SCOPE: This report is limited study made at the request of the Chief Chemical Officer and is not intended for general distribution. The report will encompass the following:

a. Information on the operational aspects of the LOBBER.

b. Information on the accuracy requirements to achieve a militarily significant effect on the target.

c. Types of targets most appropriate for attack.

d. Effective range of the system.

e. Type of firing unit appropriate for the system.

ESTIMATED MAN-HOURS REQUIRED: 700.

RELATED PROJECTS: CMLCD 61-11, 61-12, and 61-13.

BACKGROUND: On 10 March 1961, FRA sent a short study to the Director for Military Operations on the possible use of LOBBER for delivery of toxic agents. On 17 April 1961 the Chief Chemical Officer requested FRA to expand the above short study so that the U. S. Army Chemical Corps R&D Command can realistically investigate the technical aspects of this weapons system.

ESTIMATED COMPLETION DATE: 30 September 1961.

REMARKS: None.

PROJECT OFFICER Capt Terlaje

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE 30 June 1961

PROJECT NUMBER: CMLFR 6-61

TITLE: Short title, "CLOBBER" (U).

REPORT: The initial draft has been prepared and distributed to the Military Arts Division of the Chemical Corps School and within FRA for coordination.

The project officer presently is in the hospital, causing an unexpected delay in completing this project. It is expected that the delay will be no longer than one month, although this is not certain.

ESTIMATED DATE OF COMPLETION: 30 September 1961.

ESTIMATED MAN-HOURS THIS QUARTER: 450.

FUTURE PLANS: Incorporate comments on initial draft into a final report to complete the project.

PROJECT OFFICER: Mr. Wilson

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLIP-1

TITLE: Planning and Scheduling of Combat Developments Projects (U)

REPORT: 1. Issued Changes Nr 4 to CCFRA Operating Program, dated 5 June 1961.

2. Program planning for FY 62 and preceding years was necessarily tentative, since no information was received from OCCmlO to indicate which projects proposed by CCFRA on 3 February 1961 (see project report for 3rd Quarter, FY 61, paragraph 4) would be added to the program. A copy of proposals from OCCmlO to USCONARC dated 30 March 1961, recommending projects for addition to or deletion from CDOG, was received on 4 April 1961, and provided some guidance for the Agency's planning, Unofficial information also indicated that some of the projects proposed by CCFRA would not be included in the program, but did not say which projects these would be.

3. The Comptroller, OCCmlO, notified CCFRA that the following funds would be recommended for allotment to the Agency as the annual funding program for FY 62:

Budget Program	2,000	$189,000
Budget Program	2,100	2,000
TOTAL FUNDED		$191,000
Unfinanced Requirements		2,960
TOTAL REQUIREMENTS		$193,960

ESTIMATED DATE OF COMPLETION: Continuing

MAN-HOURS THIS QUARTER: 38

FUTURE PLANS: When approved Operating Program for FY 1962 is received from OCCmlO, prepare schedules for development, initiation, and completion of projects assigned to CCFRA. Estimate costs of travel and other expenditures involved in accomplishment of studies and tests.

PROJECT OFFICER: Mr Wilson

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLIP-2

TITLE: Analysis and Abstracting of Reports, Studies and Publications

REPORT: The following abstracts were prepared and processed during the past quarter:

	Backlog, End of 3rd Qtr	Prepared in 4th Qtr	Processed
Cml Division	64	56	120
Biol Division	11	33	44
Radl Division	12	42	54
Documentation Off	3	17	20
Executive Off	0	2	2
TOTAL	90	150	240

The abstracts submitted to the Documentation Office were checked for accuracy and format, typed, circulated for information, and filed. At the end of the quarter, about 16,125 abstract cards were on file, representing 4,607 separate abstracts on individual documents.

ESTIMATED DATE OF COMPLETION: Continuing.

MAN-HOURS THIS QUARTER:

Cml Division	403
Biol Division	1,241
Radl Division	1,067
Documentation	306
	3,017

FUTURE PLANS: Continue as before.

PROJECT OFFICER: Mr Wilson

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENT AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLIP-3

TITLE: Army Doctrinal Guidance Statements (U)

REPORT: No action this quarter.

ESTIMATED DATE OF COMPLETION: Continuing.

MAN-HOURS THIS QUARTER: None.

FUTURE PLANS: In the development of combat development studies, appropriate concepts will be evaluated. Suitable doctrinal guidance statements based on these concepts will be forwarded to the US Army Chemical Corps School for publication in FM 100-1. It has been recommended that a committee consisting of the three division chiefs and the Program Coordinating Officer review all CCFRA projects completed and reviewed in the past year, to determine whether any doctrinal guidance statements suitable for publication can be adapted from any of them.

PROJECT OFFICER: LtCol Furches

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLIP-4

TITLE: Instructional Presentations and Assistance to CmlC School.

REPORT: 1. Chemical Division: Negative Report.

2. Biological Division: Two hours preparation for Instructors Conference

3. Radiological Division: 95 Hours. Preparation of lesson plans and lecturing to students at CmlC School.

ESTIMATED DATE OF COMPLETION: Not applicable.

ESTIMATED MAN-HOURS THIS QUARTER: 97

FUTURE PLANS: Preparation of briefings and presentation at the Instructors Conference 1-4 August 1961.

PROJECT OFFICER: Mr. Wilson

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

Date: 30 June 1961

PROJECT NUMBER: CMLIP-5

TITLE: Program Review and Analysis

REPORT: 1. Review and Analysis presentation (oral) for the 3rd Quarter, FY 61, was made to the Commanding Officer, CCFRA, on 11 April 1961.

2. Special report to Director for Military Operations, OCCmlO, on status and progress of all CMLCD projects as of 31 March 1961, with estimated completion dates of all those not yet completed, was submitted on 14 April 1961.

ESTIMATED DATE OF COMPLETION: Continuing.

MAN-HOURS THIS QUARTER: 135

FUTURE PLANS: Continue as before.

PROJECT OFFICER: Dr. Gardner

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLIP-7

TITLE: Means of Delivery and Dissemenation of CW agents (U)

REPORT: No action this quarter, except reading for general background.

ESTIMATED DATE OF COMPLETION: Indeterminate.

MAN-HOURS THIS QUARTER: 51

FUTURE PLANS: Develop desired concepts as opportunity occurs.

PROJECT OFFICER: Lt Col Munn

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

QUARTERLY PROGRESS REPORT

Date: 30 June 1961

PROJECT NUMBER: CMLIP-9

TITLE: Army Organization (U)

REPORT: During the quarter, preliminary information was received on the ROAD 65 concept, "Reorganization of Army Divisions." This concept was not publicized, initially, as had been the case with the MOMAR concept; so no briefings were held in the Agency. The USACGSC study on the reorganization of the Army divisions was made available to the Agency in June.

ESTIMATED DATE OF COMPLETION: N/A

ESTIMATED MANHOURS THIS QUARTER: 10

FUTURE PLANS: To continue to provide guidance to the operating elements of this Agency as directed in US Army Chemical Corps Field Requirements Agency Memorandum Number 7, dated 1 April 1960.

PROJECT OFFICER: Dr. Gardner

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
QUARTERLY PROGRESS REPORT

DATE: 30 June 1961

PROJECT NUMBER: CMLIP-10

TITLE: Background Information for FR. Projects (U)

REPORT: No action this quarter, except reading for general background.

ESTIMATED DATE OF COMPLETION: Continuing.

MAN-HOURS THIS QUARTER: 55

FUTURE PLANS: Continue as required. The notebook will be revised when new projects are added to the program, and/or when new information is received on current projects.

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7) (U)

1 April - 30 June 1961

ANNEX B

REPORTS OF TEMPORARY DUTY TRAVEL

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-B 12 April 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is made:

1. Number of days on TDY 6(3-8 April 1961).

2. Place of visit: Dugway Proving Ground, Dugway, Utah.

3. Persons performing travel:

a. Dr. Donald F. Restool, GS-14, US Army Chemical Corps Field Requirements Agency, Fort McClellan, Alabama.

b. Capt Thomas R. Roark, US Army Chemical Corps Field Requirements Agency, Fort McClellan, Alabama.

4. Purpose of visit: To attend Special US Army CBR Weapons Orientation Course, Class 13A-61, Dugway Proving Ground, Dugway, Utah.

5. Persons contacted:

a. Instructors.

b. Students.

6. Report: Students consider course superior in subject matter and method of presentation. Recommend maximum participation by other personnel in FRA.

7. Action required: None.

T. R. ROARK
Capt, CmlC
Bio Div

DONALD F. RESTOOL
Biologist
Bio Div

RADIOLOGICAL DIVISION
US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 14 April 1961

MEMO FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days on TDY: 6 (3-8 April 1961).

2. Place of visit: USA CBR Weapons Orientation Course, Dugway Proving Ground, Dugway, Utah.

3. Person Performing Travel: Capt Duane M. Pederson, CmlC, 062542.

4. Purpose of visit: To attend CBR Weapons Orientation Course # 13A.

5. Persons contacted: Not applicable.

6. Accomplishment of TDY: Completed CBR Weapons Orientation Course # 13A. Personnel attending the course were afforded the opportunity to submit suggestions for improvement of the course.

Duane M. Pederson
DUANE M. PEDERSON
Captain, CmlC

David C. Smith
DAVID C. SMITH
Lt Col, CmlC
Commanding

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-X 18 April 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is hereby made:

1. Number of days on TDY: 5 (10-14 April 1961).

2. Person performing TDY: Dr. John H. Gardner, Civilian, GS-15.

3. Places visited: OCCml0, Washington, D. C.; and Army Chemical Center, Maryland.

4. Specific purpose of visit: To obtain information relative to study projects CMLCD 58-4 and 59-5.

5. Persons contacted:

a. At OCCml0: Lt Col Stefani, Lt Col MacWilliams, Capt J. J. Sugrue, Capt J. Callanan.

b. At ACC, Md.: Mr. William J. Wiseman, Jr., CO's office; M. F. Gilchrist and Bruce Roberts, Protection Division, Directorate of Development; C. E. Miller, Norman Reich, and Mr. Black, Test Division, Directorate of Development; Dr. Bernard McNamara, Toxicology Division, Medical Directorate; Lt Col Jack Lane, George Milly, Scott Thayer, and Morton Shavit, ORG.

6. Accomplishments of temporary duty:

a. At OCCml0:

(1) Discussed situation on CMLCD 58-4 and 59-5 with Captain Sugrue. Obtained a clarification of the background of some of the comments on CMLCD 59-5 and guidance for the visit to ACC immediately after. CCml0 had received a D/F from C/R&D, D/A, requesting detailed operational information on VX which was not presented in CMLCD 59-5 because of a lack of data at the time that the study was prepared. Captain Sugrue described several documents available or in preparation in CRDL which contain relevant data. The same documents also contain data making possible clarification and improvement of some of the discussion in CMLCD 58-4. These leads were followed at ACC, as discussed below.

(2) Checked with Lt Col MacWilliams and Captain Callanan on possible distribution of CMLCD 60-3. Was informed that this can be distributed to the agencies with whom coordination had been accomplished as an FRA (non-CMLCD) study, without OCCml0 approval. A letter to this effect is on the way. REASON: CONARC considers that this study merely restates policies established in 1955.

(3) In general discussion, Captain Sugrue stated that the FRA program for the next few years had been materially reduced from that which had been proposed.

b. At ACC, Md.:

(1) Discussed decontamination with Mr. M. F. Gilchrist, Protection Division. He pointed out that the characteristics of bleach make it the most versatile decontaminant now available whenever its corrosiveness can be tolerated.

(2) Conferred with Mr. C. E. Miller and Mr. Norman Reich, Test Division, on a technical memorandum in preparation which summarizes test results on persistency, pickup, and related matters on VX. This document will contain information enabling us to amplify CMLCD 58-4 and 59-5, but not to answer all possible questions. A copy, approved, but not in final reproduction, should be received shortly.

(3) Discussion with Mr. Black, Test Division, on vapor hazards. He has data in the form of graphs on this subject and has promised to send this material to us. This includes information on penetration of field structures.

(4) Discussion with Dr. Bernard McNamara, Toxicology Division, Medical Directorate. He was preparing a paper for presentation at the joint meeting of the Agents and Medical Committees of the Chemical Corps Advisory Council, 19 April 1961. In connection with this, he has prepared a mass of data on pickup, protection afforded by clothing, dose vs effect, and rate of action, summarized as tables and graphs. Copies of these have been received. He also furnished copies of two older documents on persistence and decontamination. Incidentally, he and Mr. Black stated that there is little hazard from immediate aerosol or vapor from current US VX munitions. Also, it has not been possible to demonstrate any secondary aerosol hazard from men or vehicles traversing contaminated terrain.

(5) Visited ORG and talked with Lt Col Jack Lane, George Milly, Scott Thayer, and Morton Shavit. The ORG VX study is progressing very slowly due to press of other duties. No date for completion known. ORG is also preparing a general manual of technical data on chemical agents, etc. A lot of work has been done, but there is no estimated date of publication.

JOHN H. GARDNER
Scientific Advisor

RADIOLOGICAL DIVISION
US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

MEMORANDUM FOR RECORD 27 April 1961

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 3 (14-16 April 1961).

2. Place of visit: Fort Gordon, Georgia.

3. Person performing travel: Capt Edmund J. Kennedy III, 067062, USA CmlC Field Requirements Agency

4. Purpose of visit: Observe Third U. S. Army CPX LUCKY FOXTROT.

5. Persons contacted:

(1) Colonel Boyles, Third U. S. Army Chemical Officer.

(2) Lt Col Manguno, Player, G3 Section, Third U. S. Army.

(3) Lt Col Miller, Player, G4 Section, Third U. S. Army.

(4) Lt Col Bernard, Player, G5 Section, Third U. S. Army.

(5) Lt Col Todd, Chemical Officer, 81st Infantry Division.

(6) Lt Col Moore, Chemical Officer, 31st Infantry Division.

(7) Lt Col Huffman, Chemical Officer, IV Corps.

(8) Lt Col Brown, Chemical Officer, 30th Infantry Division

(9) Major Richards, Player, G2 Section, Third U. S. Ar

(10) Major James, Player, G1 Section, Third U. S. Ar

(11) Major McKenzie, Third U. S. Army CBR Controll

(12) Major Barton, XII Corps CBR Controller.

(13) Capt Prehn, Player, G3 Section, Third U. S

Capt Vaughn, Assistant CBR Controller.

(15) Capt Frieman, Chief, CBRE, FATOC.

(16) Capt Ellis, Operations Officer, CBRE, FATOC.

(17) Capt Justiniano, CBR Controller, 30th Armored Division.

(18) Capt Hhrig, RADC Augmentation, 30th Armored Division.

(19) Capt Wilson, RADC Augmentation, 30th Armored Division.

(20) Capt Rosing, RADC Augmentation, 81st Infantry Division.

(21) Capt Klaus, RADC Augmentation, 31st Infantry Division.

(22) Capt Buckley, Assistant Chemical Officer, IV Corps.

(23) Capt Smith, Chemical Officer, 51st Infantry Division.

(24) Capt Peterson, RADC Augmentation, 51st Infantry Division.

(25) Lt Lynde, RADC Augmentation, 51st Infantry Division.

(26) Lt Fisher, RADC Augmentation, XII Corps.

(27) Lt Rosenberg, RADC Augmentation, 30th Infantry Division.

(28) Lt Choker, RADC Augmentation, IV Corps.

(29) Lt Roberts, RADC Augmentation, 31st Infantry Division.

(30) Lt Kahn, RADC Augmentation, 81st Infantry Division.

(31) Lt Brown, RADC Officer, 81st Infantry Division.

(32) Lt Warner, Chemical Officer, 30th Armored Division.

6. Accomplishments of TDY travel: The primary objectives of Exercise LUCKY STRIKE were:

a. Provide training for commanders and staffs of Active Army, Reserve, and National Guard organizations in tactical, intelligence, logistical, and administrative operations under conditions of extensive nuclear, guerilla, infiltration, CBR, and electronic warfare capabilities of both enemy and friendly forces.

b. To provide a means of schooling Active Army, Reserve, and National Guard officers in newly adopted concepts, organizations, doctrines, procedures and techniques.

c. Participating headquarters are listed in Inclosure 1.

d. Exercise LUCKY FOXTROT was based on a continuation of the situation at the close of Exercise LUCKY ECHO, but several months later to permit re-equipment and regroupment of forces. Third U. S. Army operations during Exercise LUCKY FOXTROT included attack in zone to breach the DANUBE RIVER line seizure of BUCHAREST, linkup with XVIII Airborne Corps in PLOESTI area, and securing PLOESTI and nearby oilfield complex.

e. Featured activities of the exercise were:

(1) Air Operations: Play of tactical air support, army aviation, air traffic control and air defense. Twenty-fifth Air Force participated in tactical, troop carrier, and cargo support roles.

(2) Field Army Tactical Operations Center (FATOC): Located in FATOC were G2 Element, G3 Element, Data Processing Group (G2 and G3 duty teams), Army Aviation Element (AAE), Chemical, Biological, and Radiological Element (CBRE), Tactical Air Support Element (TASE), Fire Support Element (FSE), Communications-Electronic Element (CEE), and the Air Defense Element (ADE). The Engineer Element (ENGR) was represented by an Engineer staff officer, located in the G3 Element.

(3) Aggressor Play: Conducted by controllers.

(4) Unconventional Warfare: Simulated full scale employment of special forces to organize and train guerrillas in the aggressor rear and employment of guerrillas in support of Third U. S. Army operations.

(5) CBR: Wide use of nuclear weapons and chemical agents, often in conjunction with each other, was featured. RADC teams (TOE 3-500, Team L) totalling 17 officers and 34 enlisted men were used to provide or augment RADC capability of participating units.

(6) Rear-area Security: Rear-area security and damage control was played by the 1st Infantry Brigade (Sep) which was used to command the Rear Area Security Force.

(7) Central Stock Control Point (CSCP): Played by the Atlanta General Depot through the use of transceivers.

to maintain an up-to-date accounting of supply levels in all Army depots and process demands for supplies from using units.

(8) Advance Logistical Command (ADLOG): Played by 316th Logistical Command to provide administrative and logistical support to the Third U. S. Army, limited support to USAF elements, sectional services within ADLOG and Third U. S. Army areas, and rear area damage control and security operations. Using the mobile replenishment concept, ADLOG depots shipped Class I, III, and V supplies on ADLOG transportation as far as feasible, by passing army and corps service troops.

(9) Electronic Warfare and ASA Play.

(10) Civil Affairs: Separate general staff sections and CA Command and Area Support units were employed, with the bulk of players provided by USAR CA units.

f. Based on personal observation, conversations with controller and player personnel, and the exercise critique, the following comments are offered:

(1) Nuclear weapons employment received full procedural treatment and play. Of particular interest to this observer was aggressor use of persistent chemical agents in connection with surface burst nuclear weapons to complicate friendly survey and prediction as well as to enhance the effects of the weapon itself.

(2) The CBRE in FATOC did an extremely good job in expediting CBR play. Initially, some difficulty in locating nuclear bursts was noted. This was not through any fault of CBRE personnel, but rather, was the result of incorrect coordinates and azimuths from observers to bursts being transmitted. This situation was rapidly corrected and eliminated from future effect on the exercise. Fallout predictions were prepared by gelatin process, which proved invaluable as 15 copies of each were required.

(3) Radiological centers performed in an outstanding manner, owing largely to the high caliber of the officers and men manning them. Staffs in general seemed much better informed concerning nuclear and CBR matters than in the past. Proper and timely information was usually supplied both to and from the RADC's and was, in most cases, properly utilized by appropriate staff officers and commanders. There were, however, certain exceptions, mainly due to a failure on the part of some players to familiarize themselves with their own unit SOP's. Usually, this was manifested by requests for chemical support being forwarded to a higher headquarters without regard to locally available support.

(4) The only general criticism made by CBRS personnel concerned coordination between CBRS and FSCS. Friendly offensive use of toxic chemicals was not reported to CBRS nor was it particularly sought for by CBRS. Further training should serve to eliminate this error.

(5) Much of the interest shown in CBR matters by commanders and senior staff officers is directly attributable to the CBR Weapons Orientation Course at Dugway Proving Ground, Utah. Those units whose commanders and staff officers had either attended the course or discussed it with someone who had attended were alert to the use of and defense against CBR agents to a high degree. Several of the persons to whom I spoke questioned me about the course or commented favorably on the effect it had on their personnel.

(6) The 31st Infantry Division brought a well trained organic RADC to the exercise. Augmentation personnel praised this group highly. The 30th Armored Division was also well trained in respect to CBR. The regular Chemical Officer was not present because of attendance at the Chemical Corps School, but his assistant, Lt Warner, an Infantry officer, did an excellent job as player Chemical Officer. The 31st Infantry Division was the most impressive. Lieutenant Robert G. Brown did an outstanding and highly professional job with his own RADC. Lt Brown had developed himself during the preceding summer on two weeks active duty at Third Army Headquarters and then trained his men to a level of competence seldom seen outside of full-time RADC. The general level of interest apparent throughout the 31st Division was quite remarkable.

7. The following recommendations are submitted:

a. Additional attention should be paid to training in staff procedures under active CBR conditions for Active Army, Reserve, and National Guard.

b. Special effort be made to provide Radiological Centers for Reserve and National Guard divisions. The experience of 31st and 81st Infantry Divisions indicates the possibility of thus enhancing an understanding of and confidence in CBR operations.

c. Maximum attendance at CBR Weapons Orientation Course be encouraged, especially among the senior officers of Reserve and National Guard units.

d. Chemical Corps observers be sent to LITTLE GOLF and similar exercises.

1 Incl
Participating Units

EDWARD J. KENNEDY, III
Captain, Infantry

PARTICIPATING HEADQUARTERS

I. Active Army

1. Third U. S. Army
2. IV U. S. Army Corps
3. XII U. S. Army Corps
4. XVIII Airborne Corps
5. 82nd Airborne Division
6. 2d Infantry Division
7. Atlanta General Depot
8. 503rd Military Police Battalion
9. 317th Army Security Agency Battalion
10. 1st Infantry Brigade
11. 3rd Aviation Battalion
12. 39th Transportation Battalion
13. 504th Military Police Battalion
14. 42d Civil Affairs Company
15. 937th Engineer Group

II. Reserve Units

1. 81st Infantry Division
2. 3234th Artillery Group
3. 425th Transportation Group
4. 360th Civil Affairs Area Hq
5. 412th Civil Affairs Group
6. 474th Quartermaster Group
7. 335th Signal Group
8. 429th Medical Battalion
9. 346th Engineer Group
10. 926th Engineer Group
11. 388th Ordnance Battalion
12. 324th Replacement Battalion
13. 341st Ordnance Battalion
14. 373rd Quartermaster Group
15. 316th Logistical Command
16. 43[illegible]th Engineer Brigade
17. 403rd Civil Affairs Group
18. 492d Civil Affairs Company
19. 678th Quartermaster Company
20. 899th Quartermaster Company
21. 422d Civil Affairs Company
22. 344rd Ordnance Battalion
23. 512th Transportation Battalion

III. National Guard Units

1. 30th Armored Division

2. 30th Infantry Division.

3. 31st Infantry Division

4. 48th Armored Division

5. 51st Infantry Division

6. 631st Field Artillery Group

7. 108th Air Defense Brigade

8. 252d Artillery Group

9. 226th Artillery Group

10. 166th Engineer Group

11. 108th Armored Cavalry Regiment

12. 1169th Engineer Group

RADIOLOGICAL DIVISION
US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

MEMO FOR RECORD 27 April 1961

SUBJECT: Report of TDY

The following report of TDY is hereby submitted.

1. Number of days TDY: 3 (17-19 April 1961).

2. Place of visit: Fort McPherson, Georgia.

3. Person performing travel: Capt Edmund J. Kennedy, III, 067062, USA CmlC FRA.

4. Purpose of visit: Visit Chemical Section, Third U. S. Army in connection with operational aspects of CMLCD 61-4, "Radiological Monitoring of Personnel, Supplies, and Equipment in CONUS (U)."

5. Persons contacted: Colonel Boyles, Third U. S. Army Chemical Officer; Lt Col Tieman, Deputy Chemical Officer, Third U. S. Army; Major McKenzie, Chief, Plans and Operations Section, Third U. S. Army Chemical Section; Capt Freiman, Rad Officer, Third U. S. Army Chemical Section.

6. Accomplishments of TDY travel:

a. Review of USCONARC Basic Plan, Third U. S. Army Basic Plan and OCDM Basic Plan, with particular attention to those portions dealing with military support and aid in civil defense and domestic emergencies. This review was necessitated by changes in AR 500-70, "Emergency Employment of Army Resources," which had considerable impact on CMLCD 61-4 by reason of reassignment of mission priorities.

b. Discussion at some length with Capt Freiman of radiological capabilities of Reserve and National Guard units located in Third U. S. Army area. This was to obtain more specific information regarding operational problems in CONUS, as suggested by comment from OCCmlO.

c. Review of CMLCD 61-4 to discuss specific areas of agreement and disagreement. Suggestions were made to change wording of study slightly in several places to effect change in emphasis considered desirable.

d. During exit interview, Colonel Boyles asked if FRA could furnish him, purely as a matter of information, with anything at all on the AN/USD-5 Drone. I suggested that a bibliography might be appropriate and he agreed that this would be fine. Colonel Boyles and Lt Col Tieman questioned me about the AN/USD-5; happily, I was able to answer most of their questions, which in the main dealt with general characteristics, range, payload, and employment.

7. The following recommendations are submitted:

a. That a bibliography and short body of information concerning the AN/USD-5 be prepared by Captain Kennedy and forwarded to Colonel Boyles.

b. That the FRA practice of short briefings of Project Officers on new developments be continued to allow travelers to other headquarters to answer informal queries put to them by personnel in the field.

Edmund J. Kennedy III

EDMUND J. KENNEDY, III
Captain, Infantry

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 5 May 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 11 (20-30 April 1961).

2. Place of visit: Fort Sill, Oklahoma.

3. Person performing travel: Captain Byron S. Easton.

4. Purpose of visit: Coordinate the Final Test Report, Troop Test CMLCD 61T16.

5. Persons contacted:

a. Colonel Cantrell, Director of Resident Instruction, USAAMS.

b. Lt. Col Shaw, Department of Tactics and Combined Arms, USAAMS.

c. Lt Col Blatt, Assistant Secretary, USAAMS.

d. Lt Col Butler, S-3, USATC, FA.

e. Major Trede, Department of Combat Development and Doctrine, USAAMS.

f. Captain Chamberlain, Office of Training Literature, USAAMS.

g. Captain Wallis, Department of Communications and Electronics, USAAMS.

h. Captain Phipps, Department of Gunnery Cannon/Rocket, USAAMS.

i. Captain Moreau, Department of Target Acquisition, USAAMS.

6. Discussion and Accomplishments:

a. The Department of Combat Development and Doctrine (CDD) was visited upon my arrival at Fort Sill, Oklahoma. Since both LtCol Shoss and Major Chateau were absent (attending school) Major Trede was appointed liaison officer for my visit. Major Trede explained that he had been appointed commissary inventory officer during this week and therefore would not be available to provide personal assistance. It was decided

that since the purpose of the visit was not directly within the scope of combat development I should work through Capt Chamberlain and the Office of the Director for Training Literature. CDD would monitor and lend assitance if necessary. I left one copy of the draft of the Final Test Report, Troop Test CMLCD 61T16, for review by Maj Chateau upon his return.

b. Capt Chamberlain was contacted and arrangements were made to coordinate the test report with the departments that furnished evaluators for the test. Primary emphasis was placed on determining if the U. S. Army Artillery and Missile Center could support the training requirement if the test were later approved and the rocket mission added to the smoke mission of the Smoke Generator companies. USAAMC can support the training requirement, (see inclosures 1 and 2).

c. Copies of the draft test report were sent to the following departments for comments of the evaluators (see inclosures 3, 4, and 5):

(1) Department of Gunnery Cannon/Rocket.

(2) Department of Communications and Electronics.

(3) Department of Target Acquisition.

d. Capt Chamberlain stated that the Evaluation Report and the Final Test Report would prove very valuable in the preparation of FM 6-( ), "115mm Multiple Rocket Launcher, SP." He requested that a copy of the approved final test report be sent to his office.

e. Lt Col Shaw, Department of Tactics and Combined Arms (T&CA) was furnished a copy of the draft, Final Test Report, Troop Test CMLCD 61T16 for review and comment. Col Shaw stated that he was very pleased with the results of the test. Even though the Artillery School cannot endorse the manning of fire support weapons by services or arms other than the artillery, it appears to be an excellent solution in the case of the M-91 Launcher. Since the M-91 only has a chemical capability, the artillery cannot afford the personnel spaces necessary to man fire units that may or may not be utilized on the battlefield. (It is assumed that the M-91 will be employed only in the event of toxic warfare). The proposed and tested concept of employment will provide the artillery with trained chemical fire support units when and if they are required. Col Shaw stated that in view of the above stated policy that T&CA would indicate approval of the test report by silence.

5 Incl
1. DF, ODTL to DOI
2. DF, ODTL to USATC(FA)
3. DF, ODTL to ODC&E
4. DF, ODTL to ODGC/R
5. DF, ODTL to ODTA

BYRON S. EASTON
Capt, Arty
Arty Staff Officer

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 17 May 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 10(6-15 May 1961)

2. Place of visit: a. DMO,OCCmlO, Washington, D. C.
b. Cml, Section, USCONARC, Fort Monroe, Virginia

3. Person performing travel: Captain Byron S. Easton

4. Purpose of visit: Coordinate the Final Test Report, Troop Test CMLCD 61T16.

5. Persons contacted:

a. Office of the Director for Military Operations, Office of the Chief Chemical Officer, Washington, D. C.
(1) Colonel L. E. Fellenz
(2) Captain J. J. Sugrue
(3) Captain J. A. Callanan

b. Chemical Section, USCONARC, Fort Monroe, Virginia:
(1) Colonel R. W. Breaks
(2) Major B. Fillinich
(3) Major I. H. Johnson
(4) Major J. J. Osick

6. Discussion and Accomplishments:

a. Office of the Director for Military Operations, Office of the Chief Chemical Officer, Washington, D. C.

(1) Capt. Sugrue and Capt. Callanan were contacted by the undersigned on 8 May 1961. Capt. Sugrue informed the undersigned that a formal briefing (on the draft, Final Test Report, Troop Test CMLCD 61T16) would be conducted for Colonel Fellenz during the morning of 9 May.

(2) The undersigned presented the briefing for Colonel Fellenz as scheduled. Colonel Fellenz stated that he was pleased with the briefing and the results of the test and asked the following specific questions:

(a) State a specific reason for the addition of each item of artillery and survey equipment.

(b) Is there an alternate solution to adding eight personnel spaces (light truck drivers for the launcher prime movers) to the TOE and what would the impact be?

(c) Explain in detail the recommendation for repackaging the M-55 ammunition.

(d) What would the impact be on the current Chemical Battalion (SG) if it was designated as the parent unit for four or five Smoke Generator Companies with an expanded mission?

(3) The answers given to Col Fellenz for the questions in paragraph 6a (2) will not be recorded in this report (with the exception of the answer to paragraph 6a(2)(d) because detailed answers are contained in the Final Test Report. The Chemical Battalion (SG) would have to be augmented or increased to five or six times its current strength. This increase in strength would be required to convert the battalion from an administrative to a tactical headquarters. Strength increases would be required in the following areas:

(a) Intelligence and Operations Sections.
(b) Add a communications section.
(c) Increase the maintenance capability.
(d) Provide a class V resupply capability.

(4) Colonel Fellenz directed Capt. Callanan to discuss the ammunition repackaging problem with the logistics section to determine what the impact would be. The initial response was that repackaging M-55 rockets would increase the unit cost 25 to 50 cents and that this would be prohibitive. It was pointed out that the utility of the current package, as far as troop handling in the field was concerned, was zero. If the current 15 round crate is used the over-all cost would probably be much higher than repackaging because of the high probability of damage occuring at using unit level. It was agreed that if the launcher becomes Class II equipment for certain Chemical Corps units, the design of a package, suitable for troop use, will become mandatory.

(5) Capt. Sugrue pointed out that the draft test report did not contain the schedules for revision of training literature required by paragraph 3b of the Test Directive. FRA, in coordination with the Chemical Corps Training Command, will prepare the required schedules and incorporate them into the Final Test Report.

b. Chemical Section, U. S. Continental Army Command, Fort Monroe, Virginia:

(1) Major Fillinich was contacted upon my arrival at Fort Monroe. He made arrangements for the undersigned to brief Colonel Breaks,

Major Johnson, and Major Osick on the Final Test Report. The briefing was conducted and the following comments and reactions were noted:

(a) Colonel Breaks was very pleased with the results of the test. He felt that CONARC would react favorably by approving the expanded mission for the Smoke Generator Company. He wanted assurance that the organization, employment concept, and equipment recommended would give the proposed unit a true tactical capability.

(b) Major Osick stated CONARC had announced that the Chemical Corps must produce additional justification for retention of the Smoke Generator Companies (assumption of an expanded tactical mission) or lose them.

(2) Colonel Breaks informed the undersigned that his section would submit no formal comments on the report and that it was what they were looking for. He stated that he would informally coordinate future developments in this area with DMO,OCCmlO.

Byron S. Easton
BYRON S. EASTON
Capt Arty
Arty Staff Officer

Approved David C. Smith
DAVID C. SMITH
Lt Col, CmlC
Commanding

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-B 22 May 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is submitted:

a. Number of days on TDY: 6 days (8-13 May 1961).

b. Place of visit: The Armor Center, Fort Knox, Kentucky.

c. Person performing travel: Lt Colonel Richard A. Munn, Jr.

d. Purpose of visit: To make a liaison visit to the USA Armor School, the USA Armor Board, and other appropriate activities at the Armor Center.

e. Persons contacted:

(1) USA Armor School:

Col W. E. Chandler, Dep Asst Comdt

Maj H. F. Dickson, Ch, Doc Div, DI

Col L. E. Pope, Dir, CDG

Lt Col N. W. Parsons, Dep Dir, CDG

Lt Col T. B. McGlamery, Ch, Doc Div, CDG

Maj M. R. Thompson, Doc Div, CDG

Lt Col J. D. McLanachan, Ch, Equip Div, CDG

Mr. G. L. Dean, Equip Div, CDG

Lt Col R. R. Irving, Ch, R&A Div, C&S Dept

Lt Col R. J. Bird, R&A Div, C&S Dept

Lt Col R. J. Glikes, R&A Div, C&S Dept

Lt Col D. R. Longacre, Ch, Nuc Wpns Div, C&S Dept

Maj D. E. Rice (CmlC), Nuc Wpns Div, C&S Dept

(2) USA Armor Board:

Col J. F. Polk, Dep Pres

Col W. H. Patterson, Ch, Gen Test Sec

Lt Col R. H. Townsend, Exec, Gen Test Sec

Maj H. R. Gittes (CmlC), Gen Test Sec

Maj D. H. Morgan, Canadian Ln Off

f. Resume of visit: I travelled via POV to Fort Knox on 8 May, arriving after duty hours. On 9 and 10 May, I visited the Armor School and the Armor Board, and on 11 and 12 May I attended the demonstrations presented by them for the annual meeting of the US Army Armor Association. I returned to Fort McClellan on 13 May. Pertinent contacts and activities are summarized as follows:

(1) Major Dickson (Doctrine Division, Directorate of Instruction) was my point of contact at the Armor School. He had alerted appropriate department heads of my visit, and his office arranged for me to visit anyone I wished to see. During our conversation, he informed me that Major Rice, the CmlC officer with the School, was doing an outstanding job.

(2) Visited the Nuclear Weapons Division of the Command and Staff Department and talked briefly with Lt Col Longacre and at some length with Maj Rice. He (Major Rice) has been successful in integrating C and B operations into the nuclear instruction at the Armor School. He has also devised a simplified, usable method of presenting C and B effects data to his classes so that students can more readily determine the appropriate weapon to employ on tactical situations. Major Rice requested me to ask the Cml School to send him, if possible, a 3-hour map exercise on the Employment of Chemical and Biological Agents to be presented to the Regular and Associate Career classes in the next school year. (I have passed on this request to the Military Arts Division, Cml School.) I also relayed Major Waddy Burnham's (P&T, Tng Comd) tentative TOE of a division chemical section to Major Rice, together with a request for his comments on the proposal. Major Rice indicated that he would try to answer soonest.

(3) Visited the Research and Analysis Division, Command and Staff Department. Talked with Lt Cols Irving, Bird, and Glikes and several

other officers. We discussed the proposed CD study, "Determination of After-Action Decontamination Requirements for Armored Fighting Vehicles and Ancillary Equipment (U)." The Armor School officers agreed that the problem posed is vital, and they expressed hope that the study will provide realistic answers.

(4) At the Combat Developments Group, headed by Col Pope, I visited the Doctrine and the Equipment Divisions. In conversation with Mr. Dean (Equip Dir), on decontamination, he asked me for technical data on the PDDA. I will collect available information and forward to him soonest.

(5) On my visit to the US Army Armor Board, I contacted Col Polk, Deputy President, Col Patterson, Chief General Test Section, and Major Gittes, the CmlC officer at the Board. Major Gittes and I discussed several questions which I relayed to him from the Rad Division, FRA, and from Rad Branch, CmlC School. I gave him a copy of the proposed project directive CMLFR 5-61, "Maintenance of Radiac Equipment," and he promised to send comments on it. Major Morgan, Canadian Liaison Officer, came in with a query on what are latest developments in decontamination of vehicles. He said his army would be most interested in seeing the final study FRA has proposed on the subject (see subpar (3) above).

(6) I also witnessed two excellent demonstrations in the field put on by the Armor School for the US Army Armor Association Meeting: a hasty river crossing which featured tanks fording to a depth of 8-1/2 feet; and a night attack which featured the employment of helicopters. Gen George Decker, Chief of Staff, made the keynote address to the Association.

(7) I was introduced to Lt Gen Trudeau, Chief of R&D, DA, at a party, and he told me he was endeavoring to get the Secretary of the Army to Edgewood for a briefing. He also indicated that he had scheduled a briefing for Mr. McCloy there with Fort Detrick personnel participating. I suggested that the Weapons Orientation Course at Dugway - or at least the Wig Mountain GB shoot - would be of interest to Mr. Stahr. Gen Trudeau agreed, and I received the impression that he would take some action on the suggestion.

Richard A. Munn Jr.

RICHARD A. MUNN, JR.
Lt Colonel, Armor
Armor Staff Officer

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-A 2 June 1961

MEMORANDUM FOR RECORD:

SUBJECT: Report of TDY

The following report of TDY is hereby made:

1. Number of days of TDY: 5 (21-26 May 1961).

2. Person performing TDY: Major Bliss A. Price, Executive Officer.

3. Specific purpose of visit: To attend Chemical Corps Security Officer Conference at OCCml0, Washington, D. C.

4. Persons contacted: Conferees as indicated in Inclosure 1 and personnel as indicated in paragraphs 7 and 8.

5. Copy of the agenda attached hereto as Inclosure 2. As indicated on the agenda, the conference covered the complete field of security, but was mainly concerned with the subject of Industrial Security. With regard to interpretation of AR 380-6, very little firm guidance was presented on this subject as a proposed change to paragraph 20, CCR 380-5, was not concurred in by all members of the Provost Marshal's Office. This matter will be cleared up in the near future and the change issued. It was determined that with regard to placing documents in Group 3, (paragraph 6, AR 380-6) that under the provisions of paragraphs 6a(1) through 6a(6) local commanders have the authority to place documents containing information defined in those paragraphs in Group 3. Under paragraph 6a(7), other documents which do not meet the criteria of the above subparagraphs, would be sent to the Chief's office for approval prior to placing in Group 3. (OCCml0 has already authorized the placing of BW information in Group 3).

6. It was proposed by the Provost Marshal's Office, OCCml0, that yearly meetings be held on security in order to keep everyone abreast of new developments in the security field. It was recommended that the Provost Marshal's Office send a letter to the field at least a month in advance of the meeting requesting that Commanders submit specific subjects to be discussed or clarified during future conferences.

7. While at OCCml0, I contacted Mr. Seymour Waxman, Combat Developments Division, and he discussed the following points:

a. CMLCD 59-3, BW Sample Study - Mr. Waxman asked if this study had been coordinated with the Ordnance and Engineer Corps since the study

made certain recommendations which concern these Technical Services. I replied that I did not think it had been coordinated with the Engineers and Ordnance.

Action: I checked this with Captain Roark and he has informed me that the study was not coordinated with Ordnance and Engineers since it was an internal (Chemical Corps, not CDOG) study.

Recommend that we call Mr. Waxman and inform him of this.

b. Mr. Waxman stated that there would be a Review Meeting on the SD2-Drone at CONARC on 9 June 1961, and that he was of the opinion that Dr. Restool should attend this meeting; however, we would receive further information on this subject at a later date. No further word has been received from OCCml0 on the conference.

Note: Dr. Restool will be on active duty training during the period of this conference, Recommend we inform Mr. Waxman of this.

c. Mr. Waxman stated that the Naval Ordnance Laboratory at White Oak, Maryland, is undertaking a CB Naval Study, and that the Chemical Corps Board would be the primary contact for the Navy; however, the Navy's project officers, Mr. Sims Watson and Mr. L. Mularcetr, might contact FRA; FRA should assist in every way possible. More information on this will be forwarded at a later date.

d. Mr. Waxman called in Mr. Bryce, Data Processing Systems Advisor, Comptroller's Office, OCCml0, to discuss the possibility of FRA using a Friden Flexowriter in our operations. The Flexowriter stores information such as a study, etc., on a tape which can be corrected and used to cut multilith mats. The thought behind this being that it could be used for the initial draft of the study, then as the study was revised, the tape could be corrected for the final draft report and the final report. Mr. Bryce advised contacting Lt Col Hertel as he was looking into this area for the Chemical Corps School.

Action: I contacted Lt Col Hertel and he has informed me that the School had ordered a Flexowriter; however, the order had been cancelled because delivery could not be made before the start of the new Fiscal Year. The School intends to pursue this further, and when money is available obtain a Flexowriter. Approximate costs for this machine are as follows: Flexowriter - $3286.00, Desk - $132.50, Tape Winder - $53.00, Tape Unwinder - $10.60, (Total Cost - $3882.10).

Recommendation: It is recommended that FRA take no further action until the School has obtained a Flexowriter, at which time FRA can evaluate the

machine. It may be possible for FRA to use the machine the school obtains on a part-time basis.

8. Mrs. B. S. Kitchin, Training Officer, Personnel Division, OCCml0, was contacted and the following matters discussed:

a. The DASA School Catalog for FY 1962 has been published and distributed. Mrs. Kitchin did not have a spare copy for FRA. I have obtained a copy on loan from the Radiological Division, Chemical Corps School.

Action: Requested a copy of the School Catalog from DASA.

b. The Weapons Employment Familiarization (WEF) Course at Sandia Base has been discontinued. The National Atomics Weapons Capabilities Course (NAC) is the replacement course. This course is for military only. FRA had requested one quota during the 2nd Quarter of FY 1962 for the WEF Course for an undesignated civilian.

c. The Chief's office can provide us with a quota for the Nuclear Weapons Indoctrination Course (WI). This quota would be for Class Nr 77, reporting date - 1 August, completion date - 11 August. FRA has an unfinanced requirement for one quota to this class in the 3rd Quarter of FY 1962.

Action: FRA to determine if they wish quota for the WI Course and inform Mrs. Kitchin.

d. Mrs. Kitchin stated that FRA could have a quota for the Nuclear Weapons Orientation Advance (WOA) Course, 9-G-F16, at Sandia Base during the 1st Quarter. If so, we should inform her that we do desire the quota. Note: FRA has requested a quota for this course for Major Brigden. Lt Col Franklin & Major Brigden say "yes"

Action: If we still desire to utilize this quota, we should inform Mrs. Kitchin.

e. Mrs. Kitchins pointed out that we had requested two civilian spaces and one military space for the Army Management Orientation Course, 900-G-F3, at Fort Lee, Virginia, and that the prerequisites for this course were a minimum grade of General Officer for military personnel and civilian personnel, GS-15 or higher. Therefore, it is doubtful that we will be able to obtain any spaces for this course.

Action Required: Re-program money designated for this school.

f. FRA had requested three civilian spaces for the Army Management Course, 900-G-F1. Mrs. Kitchins stated that it was very difficult to

CMLFR-A 2 June 1961
SUBJECT: Report of TDY

obtain civilian spaces for this course; Chemical Corps would only receive two quotas for FY 1962. One of these quotas was already committed to another Command and it was very doubtful that a quota could be obtained for FRA. Mrs. Kitchin stated that we should consider sending civilian personnel to some of the courses offered by the Ordnance Management Engineering Training Agency. She could not provide me with a catalog for FY 1962, but did give me a copy of the catalog for FY 1961. Mrs. Kitchin has recommended that we review the OMETA catalog and select appropriate courses for civilian personnel, and then contact her as to the possibility of obtaining quotas for these courses.

2 Incl
1. List of Conferees
2. Cy, Agenda for Conference

BLISS A. PRICE
Major, CmlC
Executive Officer

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 26 June 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of days TDY: 9(27 May-4June 1961)

2. Place of Visit: U. S. Army Command and General Staff College, Fort Leavenworth, Kansas.

3. Person performing travel: Capt. Byron S. Easton.

4. Purpose of visit: Obtain background information for Study Project CMLCD 61-1," Organization for Radiological Survey 1965-70 (U)".

5. Persons contacted:

a. Lt. Col. Martin F. Massoglia, Combat Developments Division, U. S. Army Command and General Staff College.

b. Major Keith C. Nusbaum, Department of Infantry Division, U. S. Army Command and General Staff College.

c. Captain Jon J. Sugrue, Office of the Director for Military Operations, Office of the Chief Chemical Officer, Washington, D. C. (TDY to Fort Leavenworth).

6. Discussion and Accomplishments:

a. Upon my arrival at Fort Leavenworth I contacted Col. Massoglia. I informed him of the purpose of my visit and that I was seeking definative information in the following areas:

(1) What are the needs of the user in regards to radiological survey information?

(2) What is the commanders requirement for radiological survey information?

(3) How does current doctrine fit proposed organizational and operational requirements?

(4) How will the Army be organized during the 1965-70 time frame?

b. Col Massoglia felt that Major Nusbaum could provide assistance in determining answers to the above questions. I met Major Nusbaum and he briefed me on the ROAD-65 division organization. He also discussed the "Reorganization Objectives, Division, Army, Corps-1970 (RODAC-70)". This study has just been completed by USGCSC and is due for review at USCONARC by 5 June 1961. It is an extension of ROAD-65 organizational and operational concepts to the Corps and Field Army echelons. We discussed the problem of what the Commander's requirements would be for radiological information. There is no firm policy available concerning this requirement, however, it was the general concensus of opinion that radiological survey information falls into the category of intelligence, and that as such, radiological surveys will only be conducted to obtain specific information about an area which a unit anticipates traversing or occupying. Surveys will not be required for occupied areas. Sufficient information can be obtained from monitor reports. It was agreed that major emphasis should be shifted from ground to aerial survey as the primary means for obtaining detailed radiological information. New aerial survey techniques and instrumentation are required. (The AN/ARD-6 may satisfy the aerial survey instrument requirement.) Ground surveys are too time consuming. It requires too much detailed, coordinated effort and the information takes too long to compile. It is very likely that tactical communications will not be able to handle the traffic. In many instances the combat arms troop units concerned will not be able to furnish the personnel and equipment required for the survey.

c. The following conclusions were reached:

(1) There is no authoritative basis for predicting any significant difference between the estimated organization and operational environment of the 1961-65 period and that of the 1965-70 period.

(2) Aerial radiological survey equipment should be OVM for all tactical Army Aircraft.

(3) The study must consider user needs and capabilities. Particular emphasis must be placed upon determining what information the commander and units need and how much time lag can be tolerated.

(4) The study must consider the organization envisioned for the time frame 1965-70.

(5) The study must consider the operational concept envisioned for the time frame 1965-70.

(6) Current radiological instruments and survey procedures appear to be archaic and inadequate.

(7) The study must put radiological survey in its proper perspective.

(8) Confirming fallout predictions by conducting ground radiological surveys appears to be an invalid concept because:

(a) Information produced is not timely.

(b) Existing and proposed communication facilities cannot support the traffic that would be generated.

(c) The CBRE will have no capability to confirm conflicting or apparently erroneous reports. Any attempt to do so during a ground survey would further complicate the communication picture and reduce the value of information received.

(9) TC 101-1 does not fulfill the requirements of the Army as far as radiological survey is concerned. The idealized concept presented cannot be met under field conditions.

d. Capt J. J. Sugrue, Office of the Director for Military Operations, OCCmlO was at Fort Leavenworth during the visit of the undersigned. It was pointed out to Capt Sugrue that the organizational structure for the army divisions during the 1965-70 time frame had been approved by DA(ROAD-65), but that of the Corps and Field Army echelons was still under study. It was recommended that Study Project CMLCD 61-1 be divided into two phases; Phase I to deal with the division echelon and to adhere to the current completion date; Phase II to deal with the corps, field army, and communication zone echelons with the completion date being set when firm guidance on the organizational structure of these echelons is approved by DA. Capt. Sugrue recommended that the Agency forward a letter to DMO requesting approval of this action and the reasons therefore.

Byron S. Easton

BYRON S. EASTON
Capt Arty
Arty Staff Officer

Approved
David C. Smith
Lt Col, Cml. C

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-B 28 June 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is made:

1. Number of days on TDY: 4 (19 June 1961-22 June 1961).

2. Place of visit: Fort Detrick, Frederick, Maryland.

3. Person performing travel: Dr. Donald F. Restool, GS-14, US Army Chemical Corps Field Requirements Agency, Fort McClellan, Alabama.

4. Purpose of visit: To attend Aerojet-General Briefing for the Chemical Corps on the Engineering and Design (Phase I) of the AN/USD-2 (XAE-3) Low Endurance Multipurpose Drone, and to confer with Dr. Charles Phillips in connection with CMLCD 61-9 (Rapid Warning System).

5. Persons contacted:

a. Mr. H. E. Matteson, BL Project Manager

b. Mr. C. H. Walker, Jr., CRDL Project Manager

c. Mr. Norman Wood, Aerojet-General Corp.

d. Dr. Charles Phillips, Chief, Phys Def Div.

e. Mr. Arthur Rawson, Chief, BW Detection System

f. Dr. Benjamin Warshowsky, Chief, Phys Det Branch

g. Capt John Kirsch, Asst Chief Phys Def Div.

6. Report:

a. On Tuesday, 20 June 1961, Aerojet-General briefed Chemical Corps personnel in regard to progress on drones (See Agenda, Inclosure 1).

b. After the meeting, I discussed project CMLCD 62-7 with Mr. Matteson, the new BL Project Manager. He assured me that he will continue to send FRA all information about drones. It appears that the schedule for the AN/USD-5 might near completion about the same time as that of the AN/USD-2.

CMLFR-B
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c. On Wednesday, 21 June 1961, Dr. Phillips, Mr. Rawson, and Capt Kirsch gave me a briefing in regard to the Douglas Aircraft Company Contract: B/Rapid Warning System. A total of six months slippage has occurred. Phase II is now scheduled to begin on or about 15 July 1961. The final phase will end on 4 Q 65 for the Mobile Warning System and on 3 Q 66 for the Fixed System. Mr. Rawson furnished the latest revised target program chart. In view of the long schedule for the system, Mr. Rawson agreed that FRA should go ahead with Project CMLCD 61-9 and produce a draft for comment without delay. I discussed our concepts with Mr. Rawson and he agreed throughout, especially with our Blue Sky Suggestion of superimposing the warning system on Army, Corps, and Division signal centers.

d. Later in the day, Dr. Warshowsky discussed present and future methods on techniques of detection.

7. Action required:

a. Prepare draft of CMLCD 61-9 (Rapid Warning System) for coordination as soon as possible.

b. Continue preparation of CMLCD 62-7. Investigate schedule of AN/USD-5 to determine whether or not it must be included in CMLCD 62-7 with as much detail as furnished the AN/USD-2.

Donald F. Restool

1 Incl
Agenda

DONALD F. RESTOOL
Biologist
Biological Division

3 July 1961
W. D. Coggan, Lt Col, CmlC
Commanding

AGENDA

AEROJET-GENERAL BRIEFING FOR THE CHEMICAL CORPS
ON THE ENGINEERING AND DESIGN (PHASE I) OF THE
AN/USD-2 (XAE-3) LOW ENDURANCE MULTIPURPOSE DRONE

Tuesday, 20 June 1961

Chairman - Mr. H. E. Matteson

Question Period After Each Presentation

0900	Welcome	Colonel Carl S. Casto Commanding Officer
0910	Introduction to Technical Program	Mr. H. E. Matteson BL Project Manager
0920	XAE-3 System Definition	Aerojet-General Corp
0930	Program History (Schedule & Funding)	Aerojet-General Corp
	Phase I Technical Progress	
	Airborne Vehicle	
0940	Airframe Structure	Aerojet-General Corp
	Landing Impact Device	
1010	COFFEE	
1025	Guidance and Control Equipment	Aerojet-General Corp
	IGAC Low Altitude Retention Systems Destruct Systems	
1110	Payload Modules	Aerojet-General Corp
	Temperature Controls Jettison System	
1200	LUNCH	
1300	Ground Support Equipment	Aerojet-General Corp
	Shipping Containers Handling Dolly Pre-Launch Test Set	

1340	Operational Mission Description	Aerojet-General Corp
1400	Project Services (Reports, Manuals, Spares)	Aerojet-General Corp
1410	COFFEE	
1425	Phase II Fabrication Status	Aerojet-General Corp
1445	Summary	Aerojet-General Corp
1500	Phase III Test Plans	Aerojet-General Corp
1520	Phase IV Test Plans	Mr. C. H. Walker, Jr., CRDL Project Manager
1540	Discussion Period	
1600	ADJOURNMENT	

US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 29 June 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby made:

1. Number of days on TDY: 4 (30 May to 2 June 61).

2. Place of visit: Washington, D. C.

3. Person performing travel: Capt Duane M. Pederson, CmlC, 062542.

4. Purpose of visit: To attend Army Radiac and Nuclear Surveillance Conference, 1-2 June 1961.

5. Persons contacted:

   a. Lt Col MacWilliams, OCCmlO.

   b. Lt Col Morgan, OCCmlO.

   c. Capt Callanan, OCCmlO.

   d. Capt Coursin, OCCmlO.

6. Accomplishments of TDY:

   a. Army Radiac and Nuclear Surveillance Conference.

(1) Preliminary discussions on the conference agenda (see Inclosure 1 to Inclosure 1) were held 31 May 1961 at OCCmlO. Personnel present were Col Robbins (R&D Comd), Lt Col MacWilliams (OCCmlO), Capt Pederson (FRA) and Mr. E. H. Bouton (NDL). Meeting was held to determine what, if any, a consolidated position the Chemical Corps should take with respect to the conference agenda. It was agreed that the state of the art is such for chemical dosimeters that research should continue in that area. Also, if the proper moment presented itself, the NDL concept of using aerial photography as a means of aerial radiological survey should be mentioned.

(2) An information copy of the published minutes of the conference was distributed to all conferees and is attached as Inclosure 1.

(a) Those changes to the current USCONARC approved MC's for radiac instruments brought out while discussing army requirements were noted on FRA's file copy.

(b) Capt Hickson, and Mr. Smitherman (Ft Huachuca, Arizona) mentioned the data presentation plotting board and asked whether or not the Chemical Corps felt a need existed for this item. If there is no need, they would like to know because action can then be taken to drop it from their development program. This question as well as Ft Huachuca thinking on the plotting board was relayed to Mr. Morris, CmlC School who has action on the letter from them regarding this problem.

(c) The Feasibility Test of Airborne Radiac Monitor (ARM) - Test Nr 4, which was to have been conducted in 1960 was discussed by Capt Hickson and he stated it will be done in FY 62. The reasons for this delay were also mentioned.

(d) USCONARC will review and revise the MC for the radiac calibrator for field use. This MC was not included in the current MC's for radiac instruments submitted to Department of the Army for approval.

(3) Published minutes for the Nuclear Surveillance Conference are classified (see C-5821 (23 Jun 61)). This document is on file in the Radiological Division.

b. Status of CMLCD 60-13, Organization for Radiological Survey in CONUS (U) was discussed with Lt Col MacWilliams. His comments and reasons therefor were discussed. Three areas which may require modification in the study are the use of a polar plot method to transmit radiological information, use of the AN/VRC-10 radio for survey, and the implication that only the Cml O at CONUS Army headquarters furnishes liaison to the Civil Defense Regional Headquarters in a civil defense emergency. The absence of doctrine as to which section will be responsible for all nuclear burst data (air defense, artillery, air force, and enemy ground zero locations for expended nuclear weapons) was also discussed. This generated a short discussion on multiple fallout. Lt Col MacWilliams mentioned he would be interested in seeing the "GRACMOP" package which FRA received from the US Army Nuclear Medicine Research Detachment, Europe.

c. Lt Col Morgan provided the answers to three questions posed by Lt Col Smith and requested that this information be passed on to him. This information was given to Lt Col Reagan, acting CO, the first duty day following my completion of this TDY.

d. The question of when FRA might receive information as to how much of its proposed operating program for FY 62 was discussed with Capt Callanan. He indicated that we should have an advance copy of what they would send to USCONARC as the Chemical Corps Operating Program for FY 62 the following week. The availability of guidance on the ROAD-65 concept was also discussed.

e. Two questions asked by Major Hoover were discussed with Capt Coursin. The answers received were given to Major Hoover. These questions dealt with his next assignment.

f. There was no conversion data available for the radiacmeters AN/PDR-53, AN/PRD-54, and AN/PDR-60 which would indicate the relationship between alpha contamination and the meter reading during monitoring operations. This information was requested by Lt Col Rosell for use in preparation of a training circular on alpha contamination.

g. The staff was briefed on 5 June 1961 as to the accomplishments of this TDY trip.

Duane M. Pederson

DUANE M. PEDERSON
Captain, CmlC

1 Incl
Minutes of Conference
w/4 Incl (filed in Rad Div)

David C. Smith

DAVID C. SMITH
Lt Col, CmlC
Commanding

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-R 5 July 1961

MEMORANDUM FOR RECORD

SUBJECT: REPORT OF TDY

The following report of TDY is hereby made:

1. Number of days TDY: 5 (24 June - 28 June 1961)

2. Place of Visit: U. S. Army Chemical Center, Maryland

3. Person performing travel: Mr. H. Paul Whitten, GS-14, CmlC FRA.

4. Purpose of Visit: To discuss (informally) project, CmlCD 61-7, "Employment of Tactical Radiological Warfare," with personnel at U. S. Army Nuclear Defense Laboratory, U. S. Army Chemical Corps Board, U. S. Chemical Corps Operations Research Group.

5. Persons Contacted:

Mr. Bouton, USA CmlC Nuclear Defense Laboratory
Mr. Hardin " " " " "
Mr. Shavit " " Operations Research Group
Col. Danald, USA CmlC Board
Capt Ball " " "
Mr. Shure " " "
Mr. Paulson, USA CmlC Research and Development Laboratories
Mr. Piernie, " " " " "

6. Accomplishments of TDY:

a. On 31 May 1961, I forwarded one copy each of a preliminary draft of CmlCD 61-7 to USA CmlC Board, USA CmlC Nuclear Defense Laboratory and USA CmlC ORG for personnel in these agencies to review prior to my visit to Army Chemical Center on 26 and 27 June. Personnel of the aforementioned agencies and personnel from USA CRDL had reviewed the study and conferences were held on 26 June at Nuclear Defense Laboratory and on 27 June at CmlC Board.

b. The report was well received and all personnel concurred in the general approach and tentative finding of the study. Valuable suggestions were made on specific parts of the study, mainly suggesting increased emphasis on certain aspects and on clarification and refinement of other sections. Additional sources of information were also suggested, and this reference material is being forwarded from Army Chemical Center.

c. This trip was especially beneficial in that many of the personnel contacted had worked on the previous RW Project (1948-1954) and were very knowledgeable on the subject.

H. P. WHITTEN
Physicist
Radiological Division

Chief, RW Division

RADIOLOGICAL DIVISION
US ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

10 July 1961

MEMO FOR RECORD

SUBJECT: Report of TDY

The following report of TDY is hereby submitted:

1. Number of Days TDY: 7

2. Place of visit: USA CBR Weapons Orientation Course, Dugway Proving Ground, Dugway, Utah.

3. Person Performing Travel: Lt. Col. Louis B. Stephens

4. Purpose of Visit: To attend Course #22-16, CBR Weapons Orientation Course as a member of the Academic Advisory Board of such course and to review with other members of the Board the material being presented and the manner in which it was presented.

5. Personnel contacted:

Colonel Joseph C. Prentice, Course Director
Lt Col Ben Bierer, Director of Instruction and his instructor staff.

6. Accomplishment on TDY:

Attended Course #22-61, CBR Weapons Orientation Course, 20 - 23 June 1961 as a member of the Advisory Board. Suggestion and recommendations for improvement of the course was submitted to the course director and his staff in an exit interview on 23 June.

LOUIS B. STEPHENS
Lt Col., CmlC

DAVID C. SMITH
Lt Col, CmlC
Commanding

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CMLFR-C

JUL 1 1 1961

MEMORANDUM FOR RECORD

SUBJECT: Report of TDY

1. Number of days TDY: 4 (26 through 29 June 1961).

2. Place of visit: U.S. Army Electronic Proving Ground, Fort Huachuca, Arizona.

3. Person performing travel: 1/Lt J. R. Phillips, Chemical Division.

4. Purpose of visit: The principal purpose of this trip was to obtain the reaction of USAEPG to the initial draft of CMLCD 59-16, Phase II, Part I, "Chemical Supply Systems Analysis." In addition, the progress of the other parts of CMLCD 59-16 was discussed with interested personnel at USAEPG, and a general familiarization was obtained concerning the activities of the ADP Department. Information was obtained for Major Brigden regarding the Signal Corps Study, "Field Army Emergency Warning System."

5. Persons contacted:

Lt Col A. W. Litschgi	Chief, ADP Department
Mr. C. Gregg	Ass't Chief, Systems Div., ADP Dept.
CWO Leahy	Project Off., Logistics
Mr. J. Clark	Representative, BRC
Mr. L. C. Corey, Jr.	Prog/Anal (R-W)
Mr. D. P. Thompson	Mathematician
Dr. F. W. Donaldson	Head, Prog & Opns Section (R-W)
Mr. D. L. Ross	Head, Applied Prog Group (R-W)
Mr. F. I. Cichochi	Prog/Anal (R-W)
Capt Gaither	Proj Off, Signal Corps Study, "Field Army Emergency Warning System."
Mr. L. Knight	Tech. Ass't, S&T Section, Adv Study Br, Systems Div, C Dev (Proj Off, "Field Army Emergency Warning System."

6. Discussion.

a. CWO Leahy is now the project officer for the logistics system being developed by the Systems Division, ADP Department, USAEPG. Guidance for the development of the logistics system comes from CGSC and Broadview Research Corporation is doing the systems analysis on a contract basis. Mr. Leahy indicated that the initial draft of CMLCD 59-16, Phase II, Part I, "Chemical Supply Systems Analysis," was satisfactory from his standpoint and will be incorporated into the logistics system. He remarked that the study contained some new information that he was happy to receive and that the group which made the study appeared particularly well qualified. There will be some written comments on the study draft but they will probably be of a minor nature. Some questions were raised concerning proposed procedures for handling Class V supplies and these will probably be forwarded either formally or informally. However, questions concerning Class V supplies are not of prime importance at this moment since the logistics system at USAEPG is developed only to the point where Class II and IV supplies are being considered. Mr. Leahy indicated that a Chemical Corps officer, qualified in logistics, will have to spend about 2 weeks at USAEPG to assist in fitting Chemical Corps requirements into the logistics system.

b. Mr. C. Gregg, Ass't Chief, Systems Div., ADP Department, was informed that CMLCD 59-16, Phase II, Part 2, "CBR Intelligence Systems Analysis," has been deleted from CMLCD 59-16 as premature. He was not surprised and stated that it would be at least one year before they were ready to consider technical intelligence in their intelligence system. However, he expressed the hope that the CBR intelligence study would be reinstated at some future date. Mr. Gregg indicated that CMLCD 59-16, Phase II, Part 3, "Radiological Activities Systems Analysis," and Part 4, "CBR Target Analysis Systems Analysis," would be incorporated into the Fire Support System which is under development at USAEPG and which currently enjoys the highest priority of any of the systems. The Fire Planning System is under the supervision of the Artillery School at Fort Sill, Oklahoma, with Ramo-Wooldridge doing the analysis work on a contract basis.

c. Capt F. D. Downing, Jr., the project officer for the Fire Planning System, was absent from USAEPG during the time of this visit. The Fire Planning System is divided into nuclear and non-nuclear fire planning parts. Mr. Gregg anticipated that ~~one~~ "Radiological Activities Systems Analysis" study would be included in the nuclear fire planning part of the Fire Support system and the systems analyst would probably be Mr. L. C. Corey, Jr.. Mr. Corey read over some of Major Hoover's unfinished work and indicated that it was certainly on the right track, and in fact was a more detailed and complete job than they usually get. Mr. Corey provided general background on the nuclear fire planning system and indicated two references which might be of help in our study.

(1) Nuclear Fallout Prediction (U), SD-S-4-59. This is apparently an unfinished report in their possession. The number is an internal control number in the ADP department.

(2) White Plan Report, Oct 60, Appendix 7(S), "Details of Nuclear Fire Planning (U)."

d. In the absence of Capt J. A. Coomer and Capt H. G. Williams, the Artillery Officers directing the non-nuclear fire planning system, Mr. D. L. Ross and Mr. F. I. Cichochi, contractor personnel, were contacted. A long and informative, but general, discussion of the CBR target analysis study was held with the view of learning their requirements and obtaining guidance for the work to be done.

e. Capt Gaither and Mr. Knight were presented ~~with~~ a list of questions prepared by Major Brigden. In providing answers to these questions they indicated that they had not, as of that time, established the dates for their trip to FRA and other Chemical agencies (i.e., ACC and Fort Detrick) in connection with the Signal Corps study, "Field Army Emergency Warning System." However, Capt Gaither and at least one of the contractor (IBM) personnel associated with the project will make the trip and FRA will be their first stop. They would be very happy to have Major Brigden and/or Dr. Restool accompany them on their ensuing visits to Chemical Corps activities.

f. A formal briefing of about 2 hour length, on the activities of the ADP Department, was held during my visit which I was able to attend.

John R Phillips

JOHN R. PHILLIPS
1/Lt, CmlC

David C Smith

DAVID C. SMITH
Lt Col, CmlC
Commanding

~~SECRET~~ [redacted]

UNCLASSIFIED

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY

Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7) (U)

1 January - 31 March 1961

U. S. ARMY CHEMICAL CORPS FIELD REQUIREMENTS AGENCY
Fort McClellan, Alabama

CHEMICAL CORPS QUARTERLY HISTORICAL REPORT (RCS CMLC-7)
1 January - 31 March 1961

SECTION I - INTRODUCTION

1. (U) The U. S. Army Chemical Corps Field Requirements Agency during the period reported on (third quarter, Fiscal Year 1961) operated under provisions of Chemical Corps Regulation Nr 10-18, "Field Requirements Group" (dated 1 February 1956)* until 28 February 1961, when that regulation was superseded by a new Chemical Corps Regulation Nr 10-18, "U. S. Army Chemical Corps Field Requirements Agency." The Agency (hereinafter referred to as CCFRA) was stationed at Fort McClellan, Alabama; assigned as a Class II activity under the jurisdiction of the Chief Chemical Officer, with staff supervision and operational control by the Director for Military Operations; and attached for administrative and logistical support to the U. S. Army Chemical Corps Training Command. The Commanding Officer of CCFRA during this period was Colonel Joseph S. Terrell, Jr., 053118, Chemical Corps. The Historian was Douglas E. Wilson (GS-12), Program Coordinating Officer and Documentation Officer. Where no entry or an incomplete entry is made in the sections that follow, it is to be understood that no change has occurred since the end of the last reporting period.

SECTION II - POLICY

2. (U) Mission and Responsibilities. The following statement of CCFRA's mission and general functions is copied from CCR 10-18, cited in paragraph 1 above:

"3. Mission. The Commander of the U. S. Army Chemical Corps Field Requirements Agency develops specific materiel requirements and military characteristics as a basis for the development of items of materiel, and develops new operational, organizational, and logistical concepts related to CBR, essentially in the form of tentative tactics, techniques, and organizations, which serve as a basis for training literature and platform instruction, and as guidance for the development of materiel. (The mission of the U. S. Army Chemical Corps Field Requirements Agency, as stated, is concerned with combat development activities related primarily to the mid-range period. The criteria for combat development activities during this time frame will be the development of QMR's and MC's and will correspond generally with activities concerned with the development of specific materiel).

"4. (U) General Functions. Under the direction and control of the Chief Chemical Officer, the Commander of the U. S. Army Chemical Corps Field Requirements Agency is assigned responsibility to:

*Originally designated "Field Requirements Group," the Agency was given its present designation by GO 3, OCCml0, 3 February 1957.

a. Develop and prepare the study and test portion of the Chemical Corps Combat Development Program concerning specific new operational and organizational concepts and materiel requirements; and assist in the development of the combat development programs of other DA agencies.

b. Accomplish assigned Combat Development studies to:

(1) Develop and prepare qualitative materiel requirements and military characteristics and proposed changes thereto.

(2) Develop new organizational requirements and develop a basis of manning and distribution of materiel for proposed organizations and recommend basis of issue for developmental items.

(3) Develop specific new operational and logistical concepts in the form of tactics and techniques as the basis for future doctrine and as guidance for the development of materiel.

c. Plan for, monitor, and perform appropriate actions to support the conduct of tests and field experiments.

d. Provide associate project officers as required in accordance with CCR 600-6.

e. Review and provide comments on combat development project reports concerning specific operational and organizational proposals pertaining to CBR prepared by other Army combat development agencies.

f. Maintain liaison with appropriate Army combat development agencies in connection with projects pertaining to CBR which are of mutual concern.

g. Provide combat development guidance to the R & D, Engineering, and Materiel segments of the Chemical Corps program."

3. (U) Programs and Projects. The work of CCFRA in carrying out its missions and responsibilities has continued as described in previous reports, with no change in the system of numbering projects outlined in the report for 1 October - 31 December 1960. Action on all numbered projects is summarized in Section III below, and separate progress reports on all current projects are attached in Annex A.

4. (U) Organization and Administration.

a. No changes were made in the organization of CCFRA. Changes recommended to the Office of the Chief Chemical Officer in August 1960 were still under consideration; however, since the anticipated changes in mission on which the proposal for reorganization was based were announced in the revised CCR 10-18 (see para 3 above), it was expected that the recommendation would be approved shortly. Accordingly, an organization

chart incorporating the proposed changes was submitted to the Chief Chemical Officer for signature on 15 March 1961. If this chart is approved, the Table of Distribution will be revised as soon as possible.

b. One additional officer space was authorized for CCFRA by letter, CMLWM-M-58, OCCmlO, 16 Feb 61, subject: "Military and Civilian Manpower Authorization, Voucher No OCCmlO 61-54," and three additional enlisted spaces were authorized by letter, same file and office, 1 Mar 61, subject: "Military and Civilian Manpower Authorization, Voucher No OCCmlO 61-65." The first of these was for a Medical Corps Officer in the RW Division; the second, for three Scientific and Engineering enlisted men - one Chemical Engineering Assistant, MOS 909.30 (CW Division), one Mathematics Statistical Assistant, MOS 709.30 (BW Division), and one Physics Assistant, MOS 908.30 (RW Division).

c. At the end of the quarter, CCFRA had its authorized number of officers, besides two attached lieutenants on six-months tours of duty, and was understrength five enlisted men and two civilians. On 31 March 1961 the various divisions and offices were at the strengths shown below:

	Authorized				Assigned			
	Off	EM	Civ	Total	Off	EM	Civ	Total
Office of the CO	4	0	2	6	2	0	2	4
Administrative Office	1	2	2	5	1	2	2	5
Documentation Office	0	0	2	2	0	0	2	2
CW Division	6*	4	3	13	7	2	3	12
BW Division	4*	3	3	10	5*	1	2	8
RW Division	6*	3	3	12	6*	2	2	10
TOTALS	21*	12	15	48	21*	7	13	41

5. (U) Changes in Key Personnel.

a. Assigned. The following officers were assigned to CCFRA, joining on the dates indicated, and were detailed for duty as Chemical Staff Officers in the divisions shown:

(1) Major Douthit L. Furches, 10 March 1961, CW Division.

(2) 1st Lt William F. Filipkowski, 5 January 1961, BW Division.

b. Departed. Colonel Donald D. Limoncelli, Deputy Commander, was transferred to the Military District of Washington, departing on 16 Jan 1961.

*Includes 1 Infantry (CW Div), 1 Armor (BW Div), 1 Artillery and 1 Medical Corps (RW Div) authorized; no Infantry officer assigned. All others CmlC.

c. Changes in Duty.

(1) Lt Col David C. Smith, Chief, CW Division, was assigned the primary duty of Acting Deputy Commander, effective 17 January 1961, with major additional duty as Chief, CW Division. On 15 February 1961, the designation of his primary duty was changed from "Acting Deputy Commander" to "Deputy Commander."

(2) Mr. Douglas E. Wilson, Documentation Officer, was assigned the primary duty of Program Coordinating Officer, effective 17 January 1961, with additional duty as Documentation Officer.

d. Changes in Command. The following officers successively assumed command, as announced by CCFRA General Orders on the dates indicated:

(1) Lt Col David C. Smith (in the temporary absence of Colonel Terrell), GO Nr 1, 30 January 1961.

(2) Colonel Terrell, GO Nr 2, 4 February 1961.

(3) Lt Col Smith (in the temporary absence of Colonel Terrell), GO Nr 3, 22 March 1961.

(4) Colonel Terrell, GO Nr 4, 24 March 1961.

e. Promotions.

(1) Mr. Wilson was promoted from GS-11 to GS-12, effective 12 March 1961, with change of job title from Bibliographical Analyst to Program Coordinating Officer.

(2) Miss Sandra J. Evington was promoted from GS-3 to GS-4, effective 15 January 1961, as the result of her transfer from the Documentation Office to the RW Division at the close of the previous quarter.

6. (U) Initiation or Cancellation of Major Programs or Projects. No major programs were initiated or canceled during the period reported on. Projects initiated and terminated are shown in Section III below, and in reports of separate projects, Annex A.

7. (U) Fiscal Information Bearing upon Mission or Responsibilities.

a. No change was made in allotment of funds for performance of mission (Budget Program 2000).

b. Funds allotted for TDY for military personnel to attend schools (Budget Program 2100) were increased from $2000 to $2300 by authority of OCCm10 Form 94, CMLWM-B, 27 January 1961, Action Number 44-6; and again to $2900 by authority of OCCm10 Form 94, CMLWM-B, 29 March 1961, Action Number 44-07.

c. The limitation of $7800 on obligation of funds for travel (Object Class 02) was raised to $9400 by authority of OCCmlO Form 94, CMLWM-B, 19 January 1961, Action Number 44-5; again to $11,200 by first authority cited in paragraph 7b above; and again to $11,800 by second authority cited in paragraph 7b above. Of this increase, $3100 was for travel in connection with Troop Test CMLCD 61T16 (see paragraph 9a below for title), and $900 for travel of military personnel to attend schools.

8. (U) Relationships with Other Agencies. No change was made in basic liaison relationships and procedures. Conferences and meetings at Fort McClellan of CCFRA personnel with members of other agencies are reported in Section IV below. Reports of liaison and other TDY trips in connection with CCFRA activities are attached in Annex B.

SECTION III - OPERATIONS, ACTIVITIES, AND ACCOMPLISHMENTS

9. (C) The following projects, on which the progress reports are attached in Annex A, were in progress during the period reported on:

a. Finite Combat Development Projects Assigned by OCCmlO:

CMLCD	TITLE
57-1	Air Delivery of Smoke by Army Aircraft (U).
58-4	CW Field Decontamination Requirements (U).
58-7	Impact of CBR Operations on Requirements for CmlC Personnel and Units (U) - Phase II, Requirements for Chemical Corps Units in the Army in the Field (U).
59-3	Evaluation of BW Field Sampling (U).
59-5	The Tactical Use of V Agents (U).
59-8	Communication Requirements for Radiological Monitoring and Survey (U).
59-16	Application of ADPS to Chemical Corps Field Problems (U) - Phase II, Systems Analysis (U).
59-17	Chemical Corps Participation in Combat Deception (U).
59-27	Requirements for Chemical Corps-Trained Officers by MOS, Army in the Field, 1961-1965 (U).
60-7	(New Title) Supply Procedures for Chemical Corps Class V Materiel in Support of Army Operations (U).
60-13	Organization for Radiological Survey in CONUS (U).

61-1 Organization for Radiological Survey, 1965-1970 (U); initiation deferred.

61-4 Requirements for Radiological Monitoring of Personnel, Supplies, and Equipment in CONUS (U).

61-7 Employment of Tactical Radiological Warfare (U).

61-8 Organizational and Operational Concepts of a CW Early Warning System (U).

61-9 Organizational and Operational Concepts of a BW Early Warning System, 1965-1970 (U).

61-11 Concepts for Employment of Chemical Warheads for the LITTLE JOHN Rocket (U).

61-12 Concepts for Employment of Biological Warheads for the SERGEANT Missile (U).

61-13 Concepts for Employment of Chemical Warheads for the SERGEANT Missile (U).

61T16 Capability of the Smoke Generator Company to Man the M55 Area Toxic Rocket System (U).

62-7 Operational and Logistical Concepts for Chemical and Biological Modules for Army Drone Systems (U).

b. Finite Actions and Short-Term Projects Directed by OCCmlO, Requested by Other Agencies, or Initiated by CCFRA.

CMLFR	TITLE
1	Comments, Reviews, Conferences, and Contributions to Doctrine (U), subdivided as follows:
	1a - Atomic & Radiological
	1b - Biological Weapons Systems
	1c - Chemical Weapons Systems
	1d - C&B Defense
	1e - Everything Else
2-61	Information Required for Biological Field Contamination Tests (U).
4-61	Project WASP (U).

c. Continuing Projects and Functions Initiated by CCFRA.

CMLIP	TITLE
1	Planning and Scheduling of Combat Developments Projects (U).
2	Analysis and Abstracting of Reports, Studies, and Publications (U).
3	Army Doctrinal Guidance Statements (U).
4	Orientation of Students, CmlC School (U).
5	Program Review and Analysis (U).
6	Supervise and Monitor TM 3-200 (U) - terminated during this quarter.
7	Means of Delivery and Dissemination of CW Agents (U).
8	Assistance to CmlC School in Preparation of CB Employment Pamphlets (U) - terminated during this quarter.
9	Army Organization (U).
10	Background Information for FRA Projects (U).

10. (U) Explanation and Conduct of Projects. No change was made in procedure for conduct or numbering of projects, except that CMLFR-1, as shown in paragraph 9b above, was subdivided into five major areas for the purpose of accounting for time and funds expended on CBR Weapons Systems. All other projects were assigned to appropriate CBR Weapons Systems for the same purpose. In connection with project notebooks, Major D. A. Brigden received a letter of commendation for his notebook on CMLCD 61-8.

11. (U) Projects Started.

a. No new CMLCD or CMLFR projects were started during this quarter. Project directives were received from OCCmlO on Projects CMLCD 60-7, 61-9, 61T16, and 62-7.

b. Project CMLIP-5, "Program Review and Analysis (U)," was initiated as a separate project. Activity in this area had previously been reported as "Administrative, Productive," instead of under a numbered project.

12. (U) Projects Completed.

a. During this period, the final report on Project CMLCD 60-13 and the revised final reports on CMLCD 58-4 and 59-5 were submitted to OCCmlO.

b. The final report on Project CMLCD 59-8, submitted during the preceding quarter, was approved by OCCmlO as a basis for work on Project

CMLCD 61-1 and other related studies; but because this study made use of certain organizational concepts which have since been superseded, it was decided to terminate the project without distributing the report.

c. No information had been received by the end of the quarter on the status of Project CMLCD 57-1, final draft report on which was submitted to OCCmlO during the preceding quarter.

d. Projects CMLIP-6 and CMLIP-8 were cancelled because work in both these areas had been completed and no further activity was expected.

13. (U) Tripartite Conference Activities. No plans for CCFRA participation in the Sixteenth Tripartite Conference on Toxicological Warfare had been made by the end of this period.

14. (U) Combat Developments Program Planning.

a. Changes Nr 3 to the CCFRA Operating Program were issued as of 15 February 1961. They included increases in personnel and funding authorizations, raising of limitation on TDY travel, postponement and cancellation of certain projects, and changes in title and/or schedule of certain others.

b. Draft proposals for study and test projects to be accomplished by CCFRA (and other agencies) in Fiscal Years 1962-1966 were forwarded to OCCmlO on 16 January 1961. Mr. Seymour Waxman of OCCmlO visited CCFRA on 24-26 January 1961 for a conference in which these draft proposals were discussed and revised as appropriate. As a result of this conference, CCFRA submitted to OCCmlO on 3 February 1961 draft proposals for 63 projects. A detailed breakdown of these projects is shown in the quarterly progress report for Project CMLIP-1, attached in Annex A, together with the funding estimates for FY 1962 and 1963 which were submitted on 3 March 1961.

SECTION IV - EVENTS

15. (U) Many of the events of most historical interest or importance during this period are included in the quarterly progress reports on projects, attached in Annex A, and the reports of TDY, attached in Annex B. CCFRA personnel participated in a large number of conferences and meetings at Fort McClellan with representatives of Headquarters, U. S. Army Chemical Corps Training Command and/or the U. S. Army Chemical Corps School; however, while all these discussions contributed in some degree to the accomplishment of CCFRA's mission, it is considered that the majority of them were not significant enough in themselves to be included in this report. The most important of these, and other events of particular interest not covered in the annexes (including all visits by representatives of agencies outside Fort McClellan), are briefly summarized in the following paragraphs.

16. (U) (5 January 1961) Major Hoover and Captain Pederson attended a conference with Major Brunt and other personnel of the CmlC School on the revision of DA TC 101-1, "Prediction of Fallout and Radiological Monitoring and Survey."

17. (U) (5-6 January) Lt Col (then Major) H. C. Brill, Commanding Officer, USA CmlC Nuclear Defense Laboratory, visited CCFRA and conferred with Lt Col Stephens, Captain Pederson, and Mr. Whitten on a number of topics related to activities of both CCFRA and NDL.

18. (U) (7-15 January) Mr. Whitten attended the Weapons Orientation Advanced (WOA) Course Nr 165 at Sandia Base, New Mexico.

19. (U) (20,25, and 27 January) Captain Pederson attended the first of a series of conferences, and Major Brigden the others, with Lt Col O'Neal and other personnel of the CmlC School on the establishment of an MOS and training program for CBR Operations Officers in Battle Group and lower units. This topic is related to two CCFRA projects, CMLCD 58-7 (Phase I, Part C) and CMLCD 59-27.

20. (U) (24-26 January) Mr. Seymour Waxman, OCCmlO, visited CCFRA for a conference with Colonel Terrell, Dr. Gardner, Mr. Wilson, division chiefs, and other Agency personnel on the proposed combat development program for FY 1962-1966. (See par 14 above, and report on CMLIP-1 in Annex A.)

21. (U) (25-26 January) Colonel F. V. Buldain, OCCmlO (General Counsel of the CmlC), visited CCFRA and was briefed by Colonel Terrell on the mission, organization, and program of the Agency.

22. (U) (29 January through 10 February) Lt Col Munn attended the Weapons Employment Familiarization (WEF) Course Nr 53 at Sandia Base, New Mexico.

23. (U) (31 January) Mr. K. J. Stallo, OCCmlO, visited CCFRA and discussed civilian personnel problems of the Agency with Colonel Terrell and Major Price.

24. (U) (3 February) Lt Col Stephens and Major Hoover attended a conference with Lt Col O'Neal, Major McCague, Captain Swarberg, and other personnel of the CmlC School on the script and dialogue of a proposed Training Film on operations of the CBR Center.

25. (U) (4 February through 3 March) Lt Filipkowski attended the CBR Officers Course Nr 4 at the CmlC School.

26. (U) (6-7 February) Lt Col Reagan, Major Hoover, Captain Coe, and Captain Roark attended the Training Publications Program Conference at the CmlC School with representatives of the School, CmlC Training Command, and OCCmlO.

27. (U) (7 February) Lt Col L. J. Stefani, OCCmlO, visited CCFRA and discussed combat development matters with Colonel Terrell and other Agency personnel.

28. (U) (7 February) Colonel E. S. Chapman, MC, US Army Medical Field Service School, visited CCFRA and was briefed by Colonel Terrell and the division chiefs on the mission, organization, and operations of the Agency.

29. (U) (9 February) Major Brigden gave a presentation on the Staff Chemical Officer to the 15th Chemical Officer Career Course at the CmlC School.

30. (U) (14-15 February) Lt Col Peter M. Milo, British Liaison Officer at Army Chemical Center, Maryland, visited CCFRA, was briefed by Colonel Terrell and the division chiefs on the organization and program of the Agency, and discussed matters of special interest with other Agency personnel.

31. (U) (15 February) Colonel V. F. LaPiana, OCCmlO, visited CCFRA and discussed problems relating to military and civilian personnel with Colonel Terrell and Major Price.

32. (U) (21 February) Brig. Gen. J. H. Kim, Chief Chemical Officer, Republic of Korea Army, and Colonel J. S. Yoon, Colonel B. S. Jun, Lt Col K. S. Pak, and Lt Col Y. R. Pak, also of the Republic of Korea Army Chemical Corps, visited CCFRA and were briefed by Colonel Terrell on the mission, functions, and organization of the Agency.

33. (U) (26 February through 3 March) Lt Col Smith, Lt Col Reagan, Lt Col Stephens, and Captain Coe attended the Prefix 5 Refresher Course at the CmlC School.

34. (U) (27 February through 11 March) Captain Horace E. Homesley, Jr., CmlC-USAR, was attached to CCFRA for two weeks' active duty training as a mobilization designee. He prepared a staff study on the feasibility of constructing and employing a subcritical nuclear reactor assembly for Chemical Corps teaching, training, and research.

35. (U) (27-28 February) Mr. Robert Bingham, USA CmlC Biological Laboratories, visited CCFRA and conferred with Dr. Restool and other personnel of BW Division on the drone program in relation to Project CMLCD 62-7.

36. (U) (1 March) Lt Col Hiett gave a presentation on new developments in biological operations to the Advanced Chemical NCO Course in the CmlC School.

37. (U) (4 March) Colonel Albert Glass, MC, Neuropsychiatric Division, SGO, accompanied by Captain George Solomon, MC, and Capt Jean Lyle, MSC, both of the U. S. Army Hospital, Fort McClellan, visited CCFRA and were briefed by Colonel Terrell on the mission, organization, and operations of the Agency.

38. (U) (6 March) Captain R. J. Greenwell, U. S. Army Aviation Board, visited CCFRA and conferred with Dr. Restool on military characteristics for drone delivery systems.

39. (U) (7 March) Brig Gen Fred J. Delmore, Commanding General, CmlC R & D Command, visited CCFRA and was briefed by Colonel Terrell on the operations and program of the Agency. Mr. K. E. Moreland, of R & D Command, who accompanied General Delmore, also visited the Agency and conferred with various personnel.

40. (U) (7-9 March) Major J. J. Osick, Combat Developments Division, Hq USCONARC, visited CCFRA and discussed combat developments problems with Colonel Terrell, the division chiefs, and other personnel of the Agency.

41. (U) (8 March) Colonel Terrell and Mr. Wilson attended a conference in the CmlC School with Colonel Greene, Colonel Bartling, other officers of the School and Training Command, and Colonel H. C. Gilbert and other representatives of OCCmlO on CBR Weapons Systems Evaluation procedures.

42. (U) (10 March) Lt Nebgen conferred with personnel of the Service Division, CmlC School, on trainers for army drones, in connection with Project CMLCD 62-7.

43. (U) (16 March) Colonel C. H. McNary, OCCmlO, visited CCFRA and was briefed by Colonel Terrell on the mission, organization, and program of the Agency.

44. (U) (16 March) Mr. D. L. Spanton and Mr. Richard Smith of Lockheed Aircraft Corporation, Marietta, Georgia, visited CCFRA and conferred with Lt Col Munn, Major Brigden, and Dr. Restool concerning detection, alarms, and protection against incapacitating C and B agents.

45. (U) (20-24 March) A team of inspectors from the Office of the CmlC Inspector General, headed by Lt Col J. S. Brinkley, Jr., performed the annual IG inspection of CCFRA. Lt Col Brinkley and Mr. Tanner of the inspection team were briefed by Colonel Terrell and the division chiefs on the program and accomplishments of the Agency. No written report on the results of the inspection had been received by the end of the quarter.

46. (U) (22-24 March) Colonel Terrell attended the AUSA Army Aviation Symposium at Fort Rucker, Alabama, as the Chemical Corps representative. A report of events is included in Annex B.

47. (U) (23 March) Lt Col D. G. Mac Williams, OCCmlO, visited CCFRA and conferred with Lt Col Stephens, Major Hoover, Captain Pederson, Captain Kennedy, and Mr. Whitten on matters concerning Projects CMLCD 59-8, 60-3, 61-1, and 61-4, and other activities of interest to the RW Division.

48. (U) (28-30 March) Colonel L. E. Fellenz, DMO, OCCmlO; Colonel R. W. Breaks, Cml Officer, USCONARC; and several other officers and civilians of various Chemical Corps elements and installations visited Fort McClellan to observe the final test phase of Troop Test CMLCD 61T16, which was performed by the 62d Chemical Co (Smoke Generator), 100th Chemical Group, under the supervision of CCFRA.

49. (U) (29 March) Dr. Maurice J. Murray, Chief Scientist of the Chemical Corps, visited CCFRA and was briefed by Colonel Terrell and the division chiefs on the mission, functions, and program of the Agency.

50. (U) (30 March) Brig Gen Paul Tavernier, Veterinary General Georges Guilliot, Lt Col J. P. Quinchon, Lt Col Victor Moulin, and Major Alain Derome, all of the French Army, accompanied by Colonel A. W. Meetze, Deputy Chief Chemical Officer, DA, and Capt F. D. Gravois, Jr., USA CmlC Materiel Command, visited CCFRA and were briefed by Colonel Terrell on the mission, organization, and program of the Agency. They also investigated certain aspects of Troop Test CMLCD 61T16 and the characteristics of the M55 Area Toxic Rocket.